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News Print Crisis to Be of Short Duration

Favorable News That Will Improve the Situation Is Expected Shortly To Be Forthcoming—In the Meantime In the Opinion Of Most Of Those Who Claim To Speak For the Industry the Outlook Varies From Grim To Gloomy—the Recent Price Cuts It Is Claimed Will Cost Canada $30,000,000 Annually

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 5, 1928.—Although it is strongly hinted here that favorable news on the news print situation will shortly be forthcoming, and that the present crisis in the industry will be of short duration, there is no hiding the fact that news print executives and the investing public take a very serious view of the price-cutting competition which has been inaugurated, and which has been heralded by announcements from the International Paper Company, the Abitibi Power and Paper Company and Price Brothers & Co. News print stocks have slumped on the local exchanges, and the outlook, in the opinion of most of those who claim to speak for the industry, varies from grim to gloomy. The newspapers here are by no means jubilant at the prospect of getting news print at bargain prices. They believe that the harm to the country at large far outweighs any advantage that might come to them. Thus the *Montreal Star,* Lord Atholstan's paper, and perhaps the most successful in Canada, says:

"Some radical step will have to be taken to save the industry. The improvement will not come through big mergers, although the experiment in cooperative selling which has recently failed may be tried again. It is more likely to come through drastic cuts in capitalization and the reorganization of the companies on a new basis."

Blame The Politicians

The blame for the present situation is put squarely upon the shoulders of politicians by the *Star,* for it says:

"One of the main reasons for the low price is not over production but over capacity, and this has been caused by the reckless manner in which the Provincial Government has offered the timber limits which belong to the people. The Government had it in its power to check the erection of too many mills, but they stimulated the promotion of new companies (which made favored lawyers and trusty friends rich) by throwing open the Crown timber leases in extravagant profusion. Month after month more and more leases were auctioned off and although the leaders in the pulp and paper industry frequently warned the Premier and his Ministers of the dangerous risks they were running of crippling the industry by such profligacy, they refused to heed the warnings. Money has gone into the coffers of the Provincial Government, whose demands for more and more money to spend increase annually and the promotion of new companies and the erection of new mills has swelled the private bank accounts of favored friends. If the industry is seriously crippled, the Government will have to bear a full share of the responsibility by their shortsightedness and reckless improvidence."

Starting To Give Away News Print

The *Montreal Herald* endorses the opinion of Murray Williams, a partner in one of the leading stockbroking firms in Montreal, who says: "We have cut down our forests to give our business enemies pulpwood, and now, as the result of as stupid a piece of business as we have ever seen, we have started to give away our news print. We cannot blame the politicians for the latest developments in which news print owners have engaged in a warfare which will cost Canada millions of dollars. There has been serious over-production in news print. Had there been a spirit of give and take among the manufacturers a simple cure for the difficulty would have been found. Disregarding common sense they have engaged in a cut-throat battle. This battle will prove costly to the news print mill owners, labor, investors, speculators and the country. One of the few men who can be visualized wearing a smile is that well-known enemy of the British Empire, W. R. Hearst."

Price War Declared

The *Herald* continues: "And now the lid is off. A price war has been declared. It is each for himself and the devil take the hindmost. American publishers are the only ones who really benefit, for most of our news print is exported to the United States. The price, it is said, has dropped to $50 per ton for export, against $60, the average of the past few years. Canada produces over 2,000,000 tons of news print per annum. A drop of $10 per ton (some say an even lower price has been quoted) means a loss of $20,000,000 to Canada. It means that we are cutting down our forests, manufacturing them into news print and handing over that news print to the United States at cost, if not at a loss.

"News print production is our greatest manufacturing industry, and the men engaged in it are making it our most unprofitable one and many a contributory industry will suffer. Can the country allow them to squander our natural resources in such a senseless manner?

"Of course if the price-war continues the end is obvious. The weaker companies will be smashed; the securities of the larger companies will be sold dirt-cheap to far-seeing combine-makers; the news print industry will pass into the control of a few great organizations; and prices will be restored to higher levels. But the loss meanwhile may unsettle our whole economic structure. Can we afford to pay the price!"

Loss To Canada At Least $30,000,000

The estimate of *The Herald* that the loss to Canada by the recent price cuts will be $20,000,000 is declared to be too conservative. It is said that the loss will be at least $30,000,000. Those who are familiar with production costs say that at $50 a ton not one news print company in Canada will earn dividends on its common shares. Analysis of the earning capacity of the leading producers, based on 1926 operations with news print at $65 per ton, showed average earnings of $13 per ton of news print, after de-

(Continued on page 52)

Pennsylvania Mills Report More Inquiries

Firmer Prices Are Indicated For Future Mill Shipments—Krafts Hold Firmly To Higher Quotations Made In the Early Fall and a Forward Revision in Prices Is Looked For Before the End of the Year—Paper Stock Quiet Though In Restricted Supply

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 5, 1928.—Though the demand for the seasonally active Standard lines which were moving in larger volume in the early days of October fell off in the last week of the past month there nevertheless was an encouraging side to the paper market in the frequent inquiries for near future deliveries. That the paper market is becoming more stabilized was evident in the firmer prices indicated for future mill shipments. Those grades which were weaker a few months ago now show signs of advancing quotations. This phase of firmer values was applicable to the wrapping paper section rather than to the fine grades where efforts now are under way to stabilize conditions.

Brighter Prospects For Balance Of Year

With the firmer trend in quotations and the steady tone to the demand the trade is looking for a brighter business period with the closing months of the year. As the needs for the coming holidays open up larger shipments of paper wares from the mills at standardized values there is no disturbing feature to mar the outlook for the closing months of 1928. In fact the wrapping paper section is looking forward to an advance in the kraft market as the manufacturers show surer control of the market and growing orders.

Wrapping Papers Firmer

Krafts are holding firmly to the higher quotations which they made in the early days of the autumn and a forward revision in prices is looked for before the end of the year. Containers and boards are in greater demand and prices are steady. The prices of container board are slightly better. There is the normal seasonal demand for all grades of board with container grades most bought. Tissues are firmer and in fair demand. Grey bogus is holding steady to the market's curtailed supply while fibers continue to be steady at the prices of last spring and with fair demand. As the twine market firms the trade is inclined to look upon the steady influences as presaging conditions in certain grades of paper stock into which the same raw materials enter as basic products. This is true of jute twines where firmer values indicate a possible rise in the prices of papers into which this product enters such as red rope specialties and allied lines. Cotton twines are firmer.

Fine Papers Move In Small Lots

A less active market for the fine paper grades generally closed the October month. Through the market was narrow in the reaction to the small lot purchases for many of the standard lines, the seasonally active list of social announcements, greeting card stocks and a few grades of the book and advertising specialties ran contrary to the curtailed buying and were shipped in the normal season volume which anticipates the holiday needs. Papers used by the manufacturing stationers were freely sought as the allied trade is preparing for the inventory season and the opening of the New year accounts and necessary supplies in bookkeeping requisites and recordings of business in the general industrial world which will follow the closing of the year's cycle.

Paper Stock Grows Scarcer Though Quiet

While the needs for paper stock dwindle in the lagging mill buying there are restricted supplies to meet the sparse requirements of the present market. A few grades are active among the cheaper paper stock used by the board mills and although the prices of these hold firmly the supply is limited and with increased business now in evidence a rise in quotations is looked for. Solid ledger stocks are much in demand by the mills and very little of these are available as the prices were lifted to higher levels. The mills are consuming all supplies of book papers that are to be had and while the manufacturers needs dwindle the materials on hand are likewise confined to sparsely stocked quantities. The warehouses of the wholesalers are pretty well cleaned up of all grades and collections of supplies are limited as the smaller firms fail to replenish depleted stocks in appreciable quantities.

Mill Men Express Needs For Scrutiny Of Imports

Local manufacturers who now are engaged in the production of paper on an average of five days a week owing to the keenness of competition among the producers of paper generally, express their dissatisfaction with the large volume of papers that are being imported to this country free of duty when they are not eligible to the free list. The local mill men state that there is a great deal of decorative paper being imported which really should be classed as wrapping papers and so subjected to tariff instead of being imported free and similar complaint is made on the large volume of news print being imported which really is classified correctly as second book papers with a semi coated finish. These papers as well as other grades are being distributed all over the country, it is said, to the detriment of the American made goods and closer scrutiny and knowledge of paper products is advocated among the customs officials to offset this growing menace to the nation's industry in the keen competition of current times.

Samuel Alcorn In New Offices

Samuel S. Alcorn who has been engaged in the paper distribution business for several years and recently was located in the Atlantic building is now settled in new offices at 219 S. 5th street. His business conducted as the Hy-G Sales Company, is devoted to the sale of sanitary products such as towels napkins and other coarse papers of a specialized nature. Offices of the Hy-G Company now occupy the second floor of the building at the S. 5th Street address.

J. D. Zellerbach On Eastern Trip

J. D. Zellerbach, president of the Fibreboard Products Corporation and 1st Vice President of the Crown-Zellerbach Company, one of the largest of the Western Coast paper concerns, is now in the Eastern States looking after the interests of his firms with a view to development of the Atlantic Seaboard business of the companies he represents. He stopped over in Philadelphia at the Quaker City offices of the Fibreboard Products Corporation in the Insurance Company of North America Building and made a tour of the Federal Container Corporation plant at 56th and Paschal avenue, which recently was merged with the Fibreboard Products Corporation. He will remain in the East for a fortnight making his rounds between New York and the City of Brotherly Love.

Goldman Paper & Stock Co. Expansions

As the converting business of the Goldman Paper and Stock Company, 414 S. Front street, expands there has been extended the mechanical units of the cutting department to meet the growth of this branch of the business. The newest units consist of a Moore & White sheeting machine, a new Cameron slitter and four other of these machines also will be added in the near future providing a complete set of Camerons to cuts rolls from 50 to 64 inches. The firm since its entrance into the paper and converting branches of the industry after a long history with the paper stock division has built up a larger converting business and a specialized odd lot purchasing department featuring car load jobs from mills and distributors disposing of these paper wares. The converting branch is devoted to converting large rolls into smaller. The

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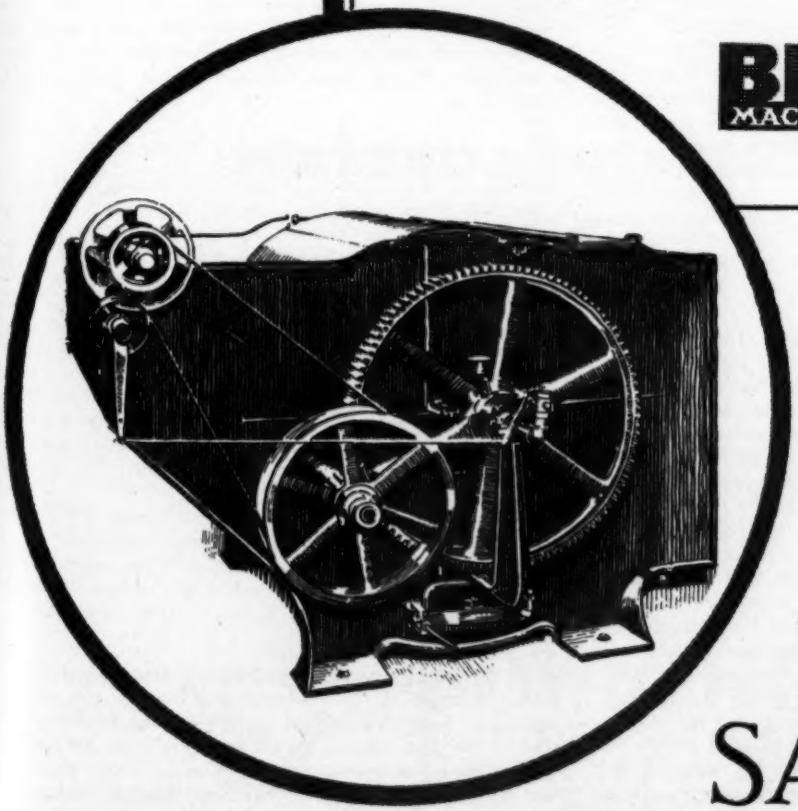


The BIRD SAVE-ALL

paper distribution and job lot department is now extended to include all grades of fine and coarse papers, which also are converted for the trade requirements. These divisions were recently added to the business of paper stock dealers and importers of pulp that for more than 35 years has been established and which was founded by Charles Goldman now retired from the firm and conducted by his son George Goldman and E. Rosenthal.

Garrett-Buchanan Company Statistics

An interesting compilation of the business of the Garrett-Buchanan Company is being sent to the trade by that recently reorganized concern which since the death of the late President John H. Sinex, has been conducted under co-operative control of employees and officials. The firm occupies the large structure at 12-20 S. 6th street. The folder which is being sent in the form of an invitation to visit headquarters shows that there now are 10 complete departments covering the entire field of printing and commercial papers. Under the recent reorganization these departments now are under various managers who are linked with the ownership of the business. They are cardboard department, manager, E. A. Keller; book paper, G. W. Weaver; announcements, L. Thompson; envelopes, F. H. Seltzer; covers, R. Burgraf; papeterie, W. H. Goebel; bonds and ledgers, J. H. Miller, wrappings, J. S. Weaver and ruling and binding, E. Buchanan. Morgan H. Thomas, president of the company directs the concern and connected with his office is the large staff of the order department. Other interesting facts of the Garrett-Buchanan Company are that there is carried in stock 200 carloads of paper and printing supplies in the warehouses; 30 salesmen are on the road covering the Eastern States; 170 office and warehouse employees are engaged in the home headquarters for handling orders; while 8 motor trucks and 3 horse drawn vehicles are engaged for the delivery of shipments in Philadelphia and immediate vicinity.

Crown Willamette Co. Transfers Business to New York

With the consolidation of the Philadelphia offices with the Metropolitan headquarters, the Crown Willamette Paper Company has transferred the local Manager Wayne A. Brown, to the New York sales division. He will remain at the New York headquarters as manager of the Philadelphia territory making his usual rounds of the Quaker City and vicinity as in former years when the office was located here in the Lafayette building. The local offices have been discontinued. Manager Brown made the tour of the local trade last week offering the dealers a splendid assortment of tissues made by the Crown Willamette Company and these were freely stocked by the dealers for the holiday requirements. The headquarters of Manager Brown now are located at 386-4th Avenue, New York as announced to the trade last week.

C. B. Daring Paper Mfg. Co. Resumes Operations

After a three weeks shut down in order to install a system which would afford a drainage from the plant located along the banks of Schuylkill River the C. B. Daring Paper Manufacturing Company, of Bridgeport, Pa., has resumed operations. The Daring Company, manufacturers of white and colored bogus bristol and chocolate layer board, installed the new drainage system to prevent contamination of the river from the refuse from its mills. Under the system of new units the drainage will be flushed away from the river and the adjoining canal into which waste has been emptied for the many years that the plant has been in operation. Within recent years there has been waged a battle between the opponents of stream pollution in the State of Pennsylvania and those who are engaged in manufacture of products which have waste matter that drains into water ways throughout the Keystone State. This battle has become hotter during the past two years when drastic legislation was introduced into the State Legislature carrying fine and imprisonment for those who pollute the rivers through industrial waste or other harmful matter by the Isaac Walton League. The State Board of Sanitation is working with the industrial leaders in an effort to avoid the passage of the bill by securing the co-operation of manufacturers in installing proper drainage system. The paper trade is represented on the committee of manufacturers who are engaged in securing this co-operation with the State officials and a large number of mill owners have been equipping their plants with proper waste outlets to conform to the requirements of the Sanitation Board. Several suits now are pending against mills through the local counsel Grover C. Lardner, of the Anti-Pollution League who last week warned the Engineers Club that mock-anti pollution bills will be introduced into the next Legislature whereby a board is to be appointed to judge whether individuals or corporation shall be allowed to dump waste into the streams to offset the more drastic bill which was shelved at the last Legislature. A concerted effort will be made by the Anti-Pollution League to keep the new bill to be presented from passing in its present form.

Wood Flong Corp. Moving to Hoosic Falls

[FROM OUR REGULAR CORRESPONDENT]

HOOSICK FALLS, N. Y., November 5, 1928.—One beater of the first unit of the Wood Flong Paper Corporation, which is moving here from Stillwater, has been installed and work started in an experimental way to determine if the machinery is ready for regular operations. This unit is composed of new machinery while the units which are to follow will be moved here from the Stillwater plant. A unit consists of two beaters, two wet paper machines and eight dryers.

When work is under way in full the company plans to operate each unit 24 hours daily with three shifts of men working eight hours each. The full working force for each unit will be about 30 hands, according to officials. Experienced men from the Stillwater plant are working on the first unit and will instruct new employees later. There are four units at the Stillwater plant which will eventually be moved here but in order to curtail production the units will be moved gradually.

B. O. Townsend, superintendent of the company, stated that it would be two or three weeks before the local plant would be able to turn out a marketable product and that it would be from 60 to 90 days before the second unit would be ready for operation.

Settle Strike at Spruce Falls Mill

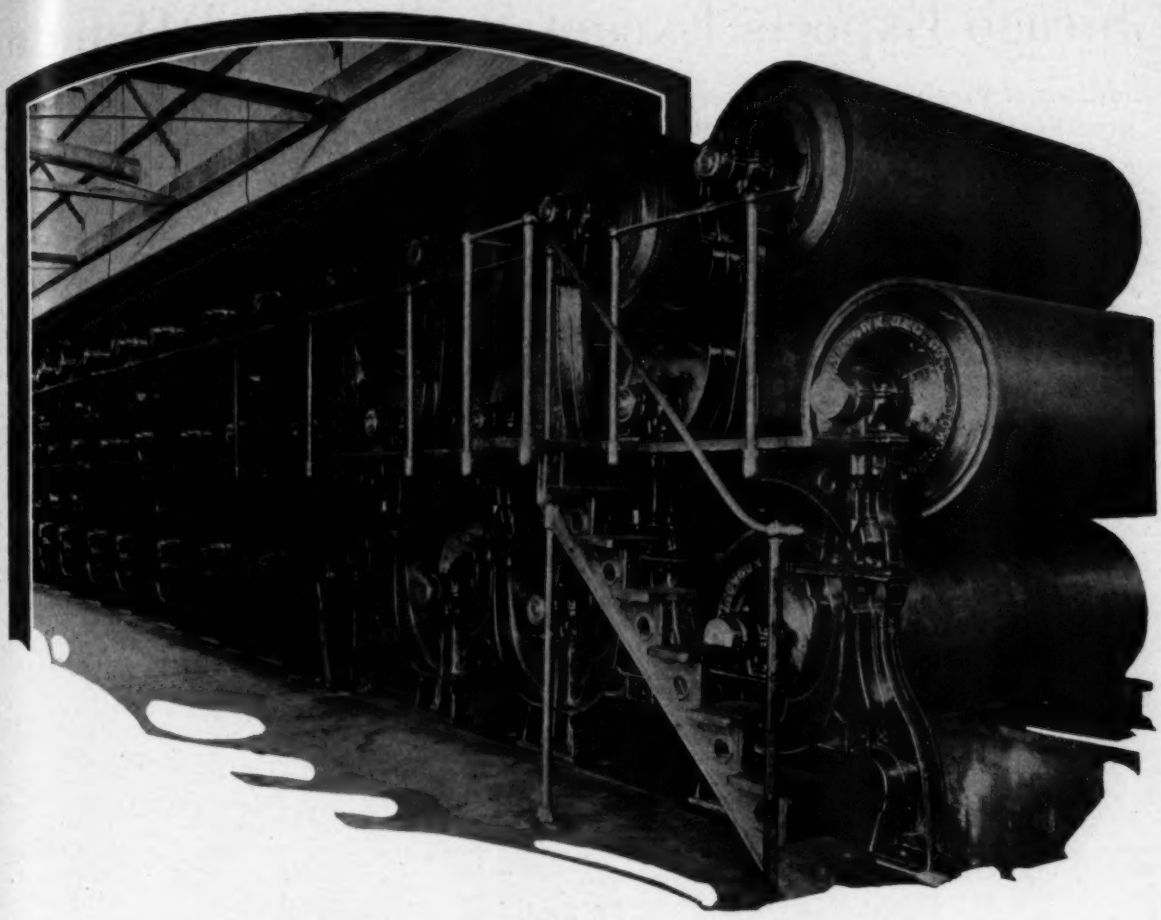
[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 5, 1928.—Differences between the Spruce Falls Pulp and Paper Company, at Kapuskasing, Ont., and the employees identified with the International Brotherhood of Papermakers' Union have been settled, according to announcement made this week by William R. Smith, president of the international organization. The strike had been in effect about a month and resulted in approximately sixty men being called out following the discharge of several men who had been elected as officers of the local recently organized in the Canadian mill town. The Papermakers' Union claims a victory in view of the fact that the settlement provides that the union shall have full and complete right to establish and maintain a local at Kapuskasing and that all men who were out on strike are to be re-employed.

The settlement was effected at a conference at Toronto attended by Peter Heenan, Canadian Minister of Labor; W. R. Smith, representing the union, and officials of the paper company. President Smith had previously made a trip to New York City where he had a conference with Major Adler, part owner of the Kapuskasing mill.

Finch, Pruyn & Co. Cutting Pulpwood

GLENS FALLS, N. Y., November 5, 1928.—Finch, Pruyn & Co. have started lumbering operations at Newcomb in the Adirondacks for the first time in several years and over 100 men are being employed in cutting timber for wood pulp. In recent years the company has been receiving its supply of timber from Canada and Maine. The work will be continued indefinitely.



Modernize Your Machines

SOMETIMES in rebuilding paper machines, minor changes to the wet end, plus increased dryer capacity will give the desired production increase. Let us explain what we have done for a number of mills, in modernizing their Fourdrinier and Cylinder Machines.

Write for Bulletin 100 describing the Keystone Removable Fourdrinier or Bulletin 102 which tells a picture story of our latest developments in Cylinder Machines—no obligation whatever.

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Chicago Expects Exceptionally Good Demand

Conditions at Present Are Satisfactory and Give Indications of Improving as the Year Approaches Its Close—Leo Altholz, President of the Chicago Paper Trade Association, Addresses Salesmen—H. R. Knott, of the Eastern Mfg. Co. To Be Next Speaker

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 5, 1928.—Conditions in Chicago point to an exceptionally good fall season and various indicators of general business seem to be going along on the right track. In the paper field everyone seems to be better off than at this time a year ago and several paper men assert that conditions both mental and in the markets themselves indicate a good fall season and a much improved year ahead.

The news print market is in a much improved condition as far as the situation around Chicago is concerned. The political campaign and a keeping up of advertising on the part of business houses have had a hand in absorbing a production reported to be at over eighty per cent of the capacity of news print mills. Coated papers are just approaching their best time of the year and, dating with October 15, demand has been constantly increasing. Fine papers are stronger while the board market continues its splendid position with an unusually large production being rapidly taken up by a steady demand. Tissues are seasonally strong in Chicago while the wrapping paper market will go along in good shape at least until into the new year.

Leo Altholz Addresses Association

One of the feature events of the past week was the talk given by Leo Altholz, president of the Chicago Paper Association, before an unusually large audience composed of members of the Chicago Division, Salesmen's Association of the Paper Industry, at the Hamilton Club, Monday, October 29. Mr. Altholz, with an excellent background of legal experience and a goodly knowledge of present day problems in the paper industry, particularly in the coarse paper field, took for the theme of his address the attribute of closer cooperation between the mill and the jobber. He touched on a number of what he termed existing evils in the coarse paper field, first of all lamenting the practice of mills selling direct to the consumer rather than selling through the legitimate jobber. Mr. Altholz clearly pointed out the necessary functions of the jobber and showed wherein the mill man might find it to his advantage to play with the jobber rather than cut through him.

"There is also a deplorable lack of solemnity and sanctity attached to the subjects of contracts in the paper business," declared Mr. Altholz. He affirmed that these agreements were taken too lightly and that continual disregard of a contract was harmful to the industry as a whole as well as to the individual practicing it. The elimination of so many sizes and grades was also suggested by Mr. Altholz as a remedy for many existing evils. He urged a standardization making for fewer sizes and grades, declaring that such practices might make it "decidedly easier to give a proper definition of just what kraft and kindred grades should be." In connection with this standardization the head of the Chicago Paper Association urged standard sizes for paper bags as well as for the various grades of paper.

Mills too Free in Giving Credit

The easiness with which almost anybody can start into the paper game, heaping over production upon over production, was also deplored by Mr. Altholz. He declared that the mills, in many cases, were entirely too lenient in giving out credit to paper brokers and believed that a more intelligent viewpoint along these lines would not only save the mills some bad debts but improve the financial and mental tone of the entire paper industry.

Having in mind many of the harmful elements in drastic changes in the price level, Mr. Altholz suggested to the salesmen that it might be a very good idea to set prices for a certain period and then reset them at some later given date so that the jobber would not feel called upon to speculate in a somewhat precarious enterprise. Such a setting of prices would also result in a more uniform flow of production at the mills, declared Mr. Altholz.

The Salesmen's Association of the Paper Industry plans a series of informative talks given by well known and experienced men in each field in the paper industry. The next speaker in the interesting program arranged by H. R. Knott, of the Eastern Manufacturing Company, president, will be Noble Gillette, president of the Chicago Paper Company and president of the National Paper Trade Association, who will be the feature attraction Monday noon, November 12, at the Hamilton Club.

General Trade Notes

Thursday, November 1, the Advertising Council of the Chicago Association of Commerce had an opportunity to see the entire 1928 electric refrigerator campaign of the General Electric Company. It was brought to Chicago by W. J. Daly, manager of the sales promotion campaign of the General Electric Company, and consisted of direct mail pieces, dealer helps, newspaper and magazine advertisements, posters, window trims, etc. It attracted the attention of a number of paper men interested in the paper used as well as in the general plan of the entire program.

Mandel Brothers, one of Chicago's great State street department stores, is making extensive use of Cellophane, a duPont product, in their toy and sporting goods departments. The two buyers in the departments, Miss Anna McIntosh and Miss Rhoda Olsen, came to the conclusion that thousands of dollars' worth of baby dolls, beds, etc., became shop worn and were lost entirely through depreciation. Now every piece of merchandise that comes into the department that is likely to become dirty and shopworn is quickly covered with Cellophane before being placed in the display cases and on counters. Miss Olsen declares that the paper not only saves thousands of dollars but also brings out the color of the article and displays it far more attractively than without the covering. It is fast becoming one of the most used items of paper in Chicago's big department stores.

A loss estimated at between $500,000 and $1,000,000 was suffered by the Producers Warehouse Company and the Bernard Paper Company, 401 West 18th street, when fire swept through the two-block-long buildings on the morning of October 29. The Bernard Paper Company was full of paper which burned fiercely and completely destroyed the interior of the warehouse.

"When Is Any Sale of Yours Actually Closed?" is the title of a special message to printers recently sent out by the Warren Manufacturing Company. The message in the form of a four-page broadside, is announcing the next Warren Booklet, "That Sale Is Closed," which is to be mailed out soon to the trade.

The West Virginia Pulp and Paper Company has just sent out to the trade a price list, effective November 2, covering stock sizes and weights in standard mill grades sold in the original packing only. Prices cover Super White, Super India, Machine Finish White, Eggshell White, White Bond, Blue Bond, Buff Bond, Pink Bond, Canary Bond, Goldenrod Bond, White Writing, Canary Writing, White Mimeograph, Index Bristol and Cream Post Card.

A preliminary conference of paper board, corrugated and solid fiber container and folding box groups was held at the Hotel Sherman, Chicago, Friday, November 2, at which a number of suitable resolutions were drawn up for the Trade Practice Conference of the Paper Board Industry to be held at the Sherman, November 3. A large number of executives representing the above mentioned industries were present.

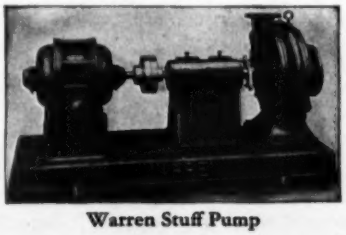
62
91
43
40
32
268

A total of 268 Warren Pumps purchased by 5 paper mills

Records tell the story! Each of these five paper mills originally purchased one or two Warren Pumps. As a result of their performance under actual conditions—their sustained high efficiency and low cost of operation—repeat orders were placed until one of the paper mills now has 91 in service, another 62, and the others 43, 40, and 32.

all within four years

Warren Pumps are built to live up to the claims made for them. Compare them part for part in design and construction with any other pumps. No effort has been spared to build them to deliver to the user the lowest possible pumping cost per year. Centrifugal and reciprocating types for every purpose. Write for illustrated, descriptive Bulletins.



Warren Stuff Pump

Warren

Steam Pump Company Inc. — **Warren Massachusetts**

AGENCIES IN PRINCIPAL CITIES

2368

Wisconsin Carton Co. are to Build at Neenah

B. C. Koepke, a Prominent Contractor of Neenah, Is Elected President of the Concern—Kimberly-Clark Corp. Makes Extensive Repairs To Atlas Mill at Appleton—Representatives of Inlander-Steindler Paper Co. of Chicago, Visit Nekoosa-Edwards Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 5, 1928.—Further organization steps have been taken by the Wisconsin Carton Company, of Neenah, Wis., through the election of officers last week. The president is B. C. Koepke, prominent contractor of Appleton, Wis. The vice-president is Henry Fellenz, of Theresa, Wis., and the secretary-treasurer, J. T. Mader, of Appleton, Wis.

A building committee has been appointed with instructions to prepare plans for the factory which will be erected at Neenah. The company purchased the 17-acre site where the Valley Paper Mills intended to build a mill. A foundation 85 by 600 feet occupies part of the land and will be utilized in part for a box factory. The company is capitalized at $200,000 and reports indicate that more than half of this amount already has been subscribed.

Extensive Repairs to Atlas Mill

Extensive repairs are being made at the Atlas mill of the Kimberly-Clark Corporation at Appleton, Wis. The entire roof over the beater room section is being replaced. Fireproof tile is used for the new coverings. Other repairs also are in progress on the building. C. R. Meyer & Sons Company has the contract.

Visit Nekoosa-Edwards Mills by Airplane

Within the space of an average working day, representatives of the Inlander-Steindler Paper Company, Chicago, traveled from their home city to Wisconsin Rapids, Wis., inspected the plants and property of the Nekoosa-Edwards Paper Company, of Nekoosa and Port Edwards, were guests at a dinner there and returned home. This was made possible by the new tri-motored Ford cabin monoplane purchased by the company recently.

In the party were Albert and Michael Steindler, owners of the Chicago concern, and eight sales representatives. The party left Chicago at 9 o'clock in the morning and made the hop of approximately 215 miles in two hours and ten minutes.

Officials of the Nekoosa-Edwards Paper Company escorted their guests to Nepco Lake, the forest nursery, tree plantations and fish hatchery and then through the Nekoosa mill. They were guests at a dinner at noon and then made a trip through the Port Edwards mill. At 3 o'clock they were on their way back to Chicago, expecting to be there about 5 o'clock. The purpose of the trip was to let the sales organization see at first hand the manufacture of the products they were selling.

Similar trips are planned for other representatives of the company located in various parts of the country. The plane is scheduled to make three trips weekly to Chicago.

Cost Association To Meet

The Wisconsin Division of the Cost Association of the Paper Industry, will hold its next meeting at the Hotel Menasha, Menasha, Wis., Friday November 16, at 1:30 p.m., to which all pulp and paper mills in that section are invited to send representatives.

The speakers will be R. E. Moody, research engineer of the Milwaukee Electric Railway and Light Company, who will speak on "Improved Office Efficiency Through Production Standards."

H. J. Bock, Cost Accountant, Chicago, who will speak on "Standard Costs and Budgeting."

Paper Mill Class Studies Pumps

Men in the paper mills who are in charge of the operation and maintenance of pumps are interested in learning more about their jobs. This is shown by an enrollment of 25 men in a class at the Appleton Vocational school which is taking up this subject only. A number of evenings will be devoted to lectures and discussions on the manner of construction of pumps and methods of upkeep and repair. The course was arranged by Arthur Bouffard, paper and pulp instructor.

Hadley V. Gerry Dead

The death of Hadley V. Gerry occurred suddenly last week at his home in Appleton, Wis. Mr. Gerry formerly was superintendent of the sulphite mill of the Riverside Fiber and Paper Company, of Appleton. He was 70 years old.

C. M. Nelson Leaves Carew Mfg. Co.

HOLYOKE, Mass., November 7, 1928.—Charles M. Nelson of this city, for 45 years in the paper making industry announced his retirement the past week as superintendent of the Carew Manufacturing Company and will take a long rest. He started in the business when 13 years of age in the old Winnebago paper mill at Neenah, Wis., E. J. Pope a former resident of Holyoke, being superintendent of the mill. His first job was picking up waste paper, at the munificent salary of $1.50 a week. He came to Holyoke in 1876 to work at the Valley Paper Company under the late John Stalker. He left shortly after to go to the Albion Paper Company where he received $6 a week. He had decided by this time that he wanted a thorough knowledge of the business and so went to the Beebe & Holbrook Paper Company working his way up until in 1898 he was a machine tender, when he left for the Worthy Paper Company as superintendent taking Robert Harper's place who had gone with the B. D. Rising Company at their new mill in Housatonic. In 1900 he returned to the Beebe & Holbrook Company to be assistant to John Stalker at the Massasoit mill.

When John Stalker resigned as superintendent in 1907 Mr. Nelson was made superintendent of the mill where he remained for 10 years. Then he returned to his home town of Neewah to take charge of the fine three machine mill of the Neenah Paper Company. Mr. Nelson's family remained here, and after a while he found it rather lonesome; so when Leon M. Yoerg resigned as superintendent of the Carew Manufacturing Co. he was easily induced to take the vacancy.

Mr. Nelson married Miss Elizabeth Stalker in 1899. They have one son John Stalker Nelson who is studying for the ministry at the Union College Theological School.

Silvertone Envelope Award

The Silvertone Envelope Award, a bronze plaque, presented by the Standard Envelope Manufacturing Company of Cleveland for the best envelope design submitted at the D. M. A. A. convention in Philadelphia last week was awarded to the Caslon Company, of Toledo, Ohio, for its winning design, "The Ace of Shovels," produced for the Ohio Power Shovel Company, of Lima, Ohio.

First honorable mention was given to the Mayflower's Log, Washington, D. C., and second honorable mention to the Josam Manufacturing Company, Cleveland, Ohio.

This is the first envelope award ever made, and its presentation each year at the D. M. A. A. convention will undoubtedly create increased interest in all envelopes.

The Standard Envelope Manufacturing Company announces that there is no stipulation made as to what the envelope design shall be.

Further details of this contest may be obtained at any time from the Standard Envelope Manufacturing Company, whose home office is at Cleveland, Ohio.

700 Tons of Board a day

by Consolidated Paper Co.

...100% Noble & Wood Equipped

Nearly a million and a half pounds of boards every day . . . boards for folding boxes, boards for shipping containers, for packaging every conceivable kind of manufactured goods, for lining the upholstery of your car . . . boards that must,—and do—stand up under wear and tear and abuse. That is the accomplishment of Consolidated's plants at Monroe, Aurora, Glenfield and River Rouge.

Part of the 700 Tons

Waterproof Automobile Panel Board
Binders Board
TempletBoard
Straw Board
Liner Board
Folding Paper Box Board
Solid Fibre Board

The Consolidated Paper Company uses 14 Noble & Wood Board Machines, fed with pulp from 27 Noble & Wood Jordans. Sturdy, dependable equipment for a sturdy, dependable product. The illustration above is a stage of a new installation at the River Rouge mill.

Just another convincing example of how Noble & Wood equipment fits the needs and plans of outstanding, progressive mills. If you are seeking board machine equipment that *produces*,—in quantity and quality,—it will be worth your while to take Noble & Wood into your calculations.

NOBLE & WOOD
MACHINE COMPANY
Hoosick Falls New York

Pulpwood Operation in Ontario to Be Active

Operations in the Thunder Bay, Rainy River and Kenora Districts Will Be on About the Same Scale as Last Year—C. C. Piche, Chief of Provincial Forestry Staff, Commends Work Being Done by Nurseries in Ontario—Abitibi Pulp Mills Increase Output

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 5, 1928.—A survey of pulpwood and lumbering concerns in the Thunder Bay, Rainy River and Kenora districts of Ontario has disclosed the fact that both of these activities will be of about the same volume as last year. The glut in the paper market, which has caused the Thunder Bay Paper Company and the Fort William Paper Company temporarily to close down, is responsible for the poor demand for pulpwood at present at the head of the lakes. This, however, will be offset by new operations at Minaki, where one of the companies has taken over the Simpson & Short limits and is said to contemplate operations on a large scale. A great many camps are also expected to be operating on the flooded area of Lac Seul, caused by the raising of this lake, for the Ear Falls Power Development. This operation will cover pine, jackpine and spruce pulpwood. Tenders are expected to be called for in the near future for this timber. In the Rainy River district the Shevlin Clarke Company will have about a thousand men employed on the timber limits in the Quetico forest. The Mathieu Company, Fort Frances, will have six hundred men working on its limits in Rainy River and the Quetico, taking out logs for railway ties, saw-logs, etc.

In the Kenora district, the Keewatin Lumber Company will have a thousand men employed in pulpwood and lumber camps on the Lake of the Woods, at St. Ignace, and on the limits leased from the Indian Department at Lost Lake, near Hudson. The G. E. Farlinger Company will have about five hundred men in the lumbering and pulpwood operations on Lake Minnettaki, Sunstrum, and at Watcombe. At Minaki, the Alladin Company will have about three hundred men on their new limits. Major McFee will have about two hundred men on his limits near Allan Water.

The Abitibi Power and Paper Company (Fort William Paper Company) has made no definite plans to operate any pulpwood camps on its limits, but will have two of its contractors taking out jackpine ties at Watcombe and Raith. Several small contractors, mostly settlers, will be employing about two hundred men between Raith and Fort William, on the C. P. R. and the Grand Trunk Railways, taking out pulpwood and ties for export. K. Shaw will be operating his last year's cut of peeled pulpwood, and a small winter operation, taking out pulpwood.

The Thunder Bay Paper Company, although shut down, will be operating the same number of company camps which were operated last year on Nipigon Straits and at Everard. About two hundred men will be employed, but it is not expected they will be buying very heavily from jobbers. The Provincial Paper Mills will be taking out pulpwood on its own limits on the Grand Trunk north of Hurkett and will employ about four hundred men.

Government Sells Pulpwood Lands

Three important timber sales were announced by Hon. William Finlayson, Minister of Lands and Forests, this week. Chalykoff & Company, providing the Canadian National Railways with track ties, secured the cutting rights to an area in Marjorie Township, District of Algoma, comprising some 50,000 jackpine ties and 500,000 feet of jackpine timber. Those interested in this sale, Mr. Finlayson pointed out, have been operating in an adjoining section of the township, and the acquirement of this parcel will materially aid in maintaining the labor situation throughout a season which, because of weather conditions, is proving rather difficult from the settlers' point of view. Prices paid were $6.60 per thousand feet, board measure, for the timber, and 17 cents each for the ties. Some 400 cords of pulpwood on a portion of Thornloe Township in the Timiskaming District were sold to the Feldman Timber Company, Limited, operators in the Timmins area, where they control two mills. The price paid was $2.05 on the stump. As this company already holds the rights to the log timber on this area, a concentrated, rather than a dual operation will result. The wood will be floated down the Mattagami River to Jacksonboro for the supply of the mill of the Abitibi Power and Paper Company. To the Le Page Lumber Company of Port Arthur was sold an area in Horne Township, Thunder Bay District. This sale involved the cutting of some 67,200 ties and 1,600 cords of spruce and balsam, in addition to 5,000 cords of poplar. Timber in this area is primarily jackpine and spruce. Excellent prices, the department states, were received on all classes of timber figuring in the sale.

Toronto Paper Men Travel by Air

Keeping well up with the trend of the times, R. B. Hall and C. Ernest French, of the Toronto office, Howard Smith Paper Mills, a few days ago flew to Montreal in order to attend the annual sales meeting of the company. They left Leaside Airport in Toronto at 10:15 a.m. and taxied up to the Hangars at St. Huberts Airport, Montreal, at 1:15, after an uneventful trip save for the extreme cold upon nearing Montreal. Capt. R. K. Rose, Royal Canadian Air Force, was pilot of the Fairchild monoplane in which the trip was made. Mr. Hall is an old Royal Naval Air Service pilot and this was his first flip since the war. Mr. French is an old Royal Flying Corps pilot and is now actively engaged in flying for pleasue as a member of the Toronto Flying Club. This was his second flight to Montreal, having taken Mrs. French along the first time.

Says Reforestation Is Practical Project

On his return to Quebec City from a visit to the Ontario Forestry Station at St. Williams, Ont., which he inspected in company with several other prominent persons interested in forestry, C. C. Piche, chief of the provincial forestry staff, Quebec, said the nurseries and plants which they visited in Ontario are adequate proof that reforestation is a practical enterprise. "The nursery with its 10,000,000 trees and the plantation covering approximately 1,500 acres are, indeed, wonderful sights." Mr. Piche said. "The trees are growing fast and forming excellent stands and prove conclusively that reforestation is a very practical undertaking. The nursery and plantation work have done a great deal to change the conditions in that section of Norfolk County. The plans of the Ontario Government for reforestation are meeting with success," Mr. Piche added, and over three hundred men are employed on the work.

Pulp Mills Start Increased Output

Production at the pulp mills at Espanola, Sault Ste. Marie and Sturgeon Falls, Ont., which were taken over some time ago by the Abitibi Power and Paper Company, is being increased. While the renewed activity may only be temporary, nevertheless the increased employment augurs a better market, and is gratifying to the citizens of the three paper towns. The payroll at Sturgeon Falls amounts to about 300 men. During the period of depression only one machine was working, while now two are in operation, which is two-thirds capacity. Espanola will be running in a few days at more than half capacity, providing employment for about 300 men, an increase of nearly 150 men over the force maintained this summer when only one machine was running. It is not likely there will be any effect on the woods operations of the company

TAGGART OSWEGO PAPER AND BAG CORPORATION

A Briner economizer installation is connected to each of the two exhaust openings in the hood. Exhaust fans take the hot moist air from the hood and pass it through the two economizers where it is condensed. In giving up its heat, this moisture laden air increases the temperature of fresh air which is supplied to the economizers by heating fans.

From October Issue Paper Industry.

another new 168" machine fully equipped with

Briner Economizers

Licensed Under Patents of E.A.Briner and John E.Alexander

The news of the completion of practically every new mill of importance in the industry carries the information that Briner Economizers are a part of its machine room equipment. No Waste of heat and excessive steam costs are permitted in modern mill management.

The benefits, advantages and savings derived from operation of Briner Economizers are not confined to new mills. It will be worth your while to investigate possibilities for your present plant before extreme cold weather sets in.

There Is Still Time To Insure Savings From Briner Economizer Operation this Winter If You Get In Touch With Us Now. Consult Our Nearest Office.

J. O. ROSS ENGINEERING CORPORATION

208 W. Washington Street CHICAGO | Main Office—30 E. 42nd Street NEW YORK | 303 Lumbermens Bldg. PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED

NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS

HEATING—VENTILATING—DRYING

as there is a large supply of pulpwood available. It is over two years since the mills at Espanola and Sturgeon Falls were operating at full capacity. Espanola was operating four machines and Sturgeon Falls two this spring when the curtailment of production occurred.

A New Type of Pulpwood Carrier

An improved type of pulpwood carrier has been designed by J. Reid, marine engineer of Toronto and London. It will have only two hatches, each sixty feet long. The whole of the under deck cargo space is thereby opened up fore and aft, and across the ship, to the action of the loading and discharging equipment. Mr. Reid has also invented a mechanical wood stacker, or stowing machine, now being tested. If successful this will eliminate all man-handling of the logs in the hold or of deck loads during handling operations. It is estimated that a saving of time equal to one day per load carried, will be effected by the new vessel and its special equipment. When not engaged in pulpwood transporting, this type of craft may be employed as a carrier of grain, coal or general cargo, special hatch beams and covers being provided when thus used, though they need not be carried when the ship is engaged in handling pulpwood. It is planned to place several of these new canal types in service early next season.

Air Cruising of Value to Paper Trade

Six thousand flying hours without a single major accident was the record of the Ontario Government airplanes for the past season. The flying cost was $75 an hour last year; this year it might be down to $65, but it is not likely to be reduced much more, Hon. William Finlayson, Ontario Minister of Lands and Forests, said in a public address in Toronto this week. The Minister stated that as a result of the simple application of business methods, timber-cruising costs had been cut down so that it was figured any place in Ontario could be cruised at one-tenth of one cent per acre. In referring to the use of airplanes in forest preservation, Hon. Mr. Finlayson pointed out that in 1923 the area burned over was 2,000,000 acres, the average for fifty years would be about 300,000, but since the aerial service had been established it had been brought down to 36,000 acres. This year it would not be quite so good—perhaps 60,000 acres. One important work to the lumber men and the paper people, he said, was timber cruising from the air. Under the modern system the Government got its information and told the lumber and paper people their figures and that if they wished to tender on that basis they would be welcome. It was found the largest timber and paper concerns were willing to tender on the Government figures. A general survey of the province was being attempted and in a few years it would be possible to have a very accurate inventory.

Toronto Box Firm May Invade the West

Victor Donaldson, president and general manager of Firstbrook Bros., Limited, Toronto, manufacturers of wooden boxes, corrugated shipping units, paper cartons, etc., was recently in Winnipeg on business and it is said that his company intends invading the West. The company's present headquarters and chief manufacturing plants are located in Toronto, but will early in the new year be transferred to one large factory at Mount Dennis, a suburb of Toronto, which will, on completion, constitute the most modern plant devoted to the package industry in the Dominion. Firstbrook Boxes, Limited, was recently formed as the result of an amalgamation of the interests of Firstbrook Bros., Limited, and Canada Cartons, Limited, two manufacturing corporations holding dominant positions in their respective spheres of activity. The history of these predecessor companies makes interesting reading. The original business of Firstbrook Bros., Limited, was founded in 1867 by William Firstbrook and was taken over by John and William A. Firstbrook, sons of the founder, in 1879. Firstbrook Bros., Limited, grew to be the largest manufacturers of shipping cases in Canada. Canada Cartons, Limited, of which Mr. Donaldson was president, acquired the business of the Rudd Paper Box Company, which operated a large paper box factory in Toronto. Considerable additions to this plant were made from time to time and were financed out of earnings. Canada Cartons, Limited, through the enterprise of Mr. Donaldson, secured the sole rights to all the Robert Gair Company's rights and patents for Canada and the British Empire. The importance and significance of this connection will better be realized when it is mentioned that the Robert Gair Company are the largest manufacturers in the world of paper cartons, a form of package which has had an almost revolutionary effect on the shipping container industry. It is stated that Firstbrook Boxes, Limited, are already exceeding the volume of business looked for at the time of the merger, and with the growth of Canadian industry feel the necessity for further expansion of manufacturing facilities to cope with continually increasing demand. An indication of the company's intention to meet this situation is seen in the enlargement of the Mount Dennis plant from the original 130,000 square feet to 160,000 square feet, and the visit of Mr. Donaldson to Winnipeg. He is understood to be making a close survey of the western field with a view to ascertaining the desirability of establishing a plant there and thus decreasing sales costs in Western Canada and on the Pacific Coast.

Notes and Jottings of the Trade

Contracts have been let by the Hinde & Dauch Paper Company of Canada, Toronto, whose plant is on Hanna avenue, for a four story and basement addition to their mill, 160 x 400 feet. The company are large manufacturers of box board and already have in operation a large plant at Trenton for the mnufacture of straw board for corrugating purposes. Work on the Toronto plant will be proceeded with immediately.

A meeting of the directors of the Howard Smith Paper Mills was held a few days ago at their Cornwall, Ont., plant, when the local mills were inspected. The visitors were enthusiastic over the efficiency of the plant and its prospects.

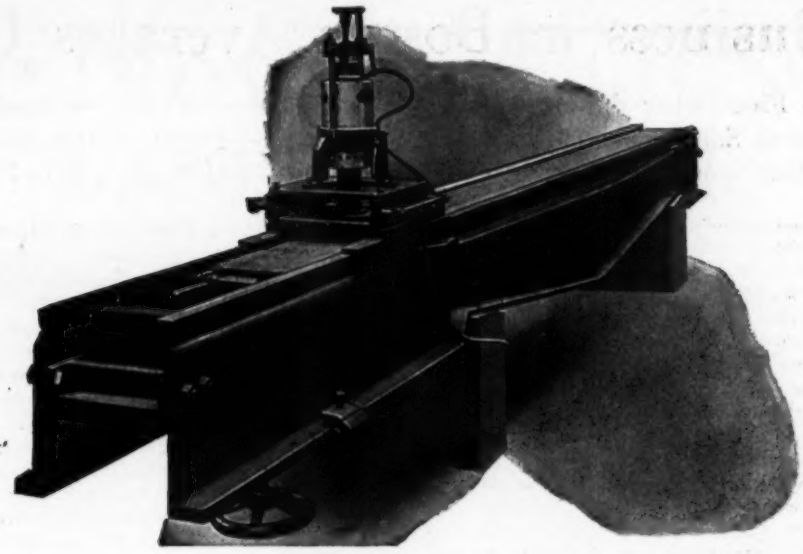
A. B. Gates, general engineer of the Canadian General Electric Company's Peterborough Works, gave a talk a few days ago on "Paper Machine Drives in a Modern Mill," before the Toronto Electrical Association, at the University of Toronto.

Conditions for outside work in Northern Ontario are exceptionally good, according to a report just issued by W. E. Hunt, superintendent of the Employment Bureau at Sault Ste. Marie, Ont., and the demand for men is always in excess of the supply. Mr. Hunt states that he recently had orders for fifty pulpwood cutters but the men are not taking the work, so he sent to Sudbury for the necessary number. There is need for pulpwood cutters and log makers, he says.

Definite decision to establish a branch in Regina has been made by the Dominion Envelope and Cartons, Limited, Toronto. The firm had been contemplating this move in Saskatchewan for a considerable time and is already established in Manitoba and Alberta. The organization includes the following companies: Dominion Envelope and Cartons, Limited, Dominion Boxboards, Limited, Dominion Printing and Carton Company, Edmonton, and the Winnipeg Paper Box Company, the Dominion Envelope and Cartons Western, Limited, and the Hitchens Box Company, Winnipeg.

The Commercial Stationers' Association of Toronto has appointed a permanent secretary in the person of William Allan and has opened offices at 306 Colonial Building, King street, East, Toronto. The Association will maintain a Credit Bureau, a Merchandising Exchange Bureau and an Information Bureau, to which members may apply for information as to how they may obtain merchandise in which they may be interested. J. S. Luckett, of Vatter-Luckett, Limited, is the president of the association.

A number of the Toronto paper wholesalers attended a meeting of the Chemical Association at the University of Toronto a few days ago when the matter of the paper trades' cooperation in the Research Foundation established by the Ontario Government was under discussion.



Do Away with Hand Planing and Uneven Surfaces on Suction Boxes

Send for this Booklet

Send for this booklet—It describes in detail The Valley Suction Box Planer

The Valley Suction Box Planer restores an absolutely true surface to suction boxes, giving them a "factory made" finish that hand planing can never restore—without loss of time—without labor—without variation—quickly.

The Valley Suction Box Planer is a single compact unit—operates by electrical power only and requires little space. It can be located in any convenient space in your machine room or maintenance shop—alongside a wall. The planing device proper is portable. It is a solution to suction box troubles.

Let us send you complete details about the Valley Suction Box Planer—without obligation.

VALLEY
Equipment Includes

Beaters: Holland and Niagara
Deckers: Single and Double
Agitator Equipment
Screens: Flat and Rotary
Pumps: Centrifugal and Stuff
Cylinder Paper Machines
Voith Stock Inlet
Laboratory Equipment
Stock Valves: 2 and 3 Way
Stock Consistency Regulators
Beater Rolls and Fillings
Digester Fittings of all Kinds

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

Western Manufacturing and Sales Division: Smith and Valley Iron Works Co., Portland, Oregon

Paper Business in Boston Averages Up Well

Some Dealers in Fine Paper Report Sales Very Satisfactory—While the Market for Printing Papers Has Been Somewhat Spotty, Values Are Firmer—Prices on Box Boards Remain Unchanged But Somewhat Less Activity is Reported—Old Papers Are in Fair Demand

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 5, 1928.—The average volume of business in paper is good here. In some cases handlers of fine paper say the sales are very satisfactory. One wholesaler of printing papers says that the market has been somewhat spotty, but that values are firmer. The amount of coarse paper moving is, in general, satisfactory. Values remain unchanged, as for some time. The box board situation is the same as far as prices are concerned, but in some quarters there is less activity

There is a fair demand for old papers. Overissue news has advanced so that this commodity is now quotable at .85 to .90, compared with a former range of .70 to .75. The rise has taken place because of the recent upward movement of old newspapers, now quotable at .75 to .80. In bagging, there has been an advance in scrap sisal, because of a greater demand. Slackness in orders for dark cottons, in foreign rags, has sent the price down, so that the quotation is now 1.55 to 1.60, compared with a previous range of 1.60 to 1.65. Lace curtains have tended somewhat lower, although the price of 5.50, which has prevailed, can still be obtained for them, according to the need or use. On the other hand, they are also obtainable at 5. A fair quotation is 5.25 to 5.50.

Fine Paper Division Has Luncheon

A well-attended luncheon meeting of the Fine Paper Division of the New England Paper Merchants Association was held at the Chamber of Commerce on Wednesday. Arthur E. Ham, a vice-president of the association, presided.

Puts in Complete Line of Acceptance Bond

Carter, Rice & Co. Corporation has just put in a complete line of Acceptance Bond and has made up a folder containing a sample swatch showing the colors and weights. The folder contains the statement: "Acceptance Bond is an airdried bond, priced low enough for economy, yet plainly exhibiting characteristics in keeping with the generous proportions of rags from which it is made."

Mailing Out Luray Bristol

Luray Bristol is being mailed out by Carter, Rice & Co. Corporation in connection with the Bristol campaign. Luray Bristol is a popular grade with a fine printing surface and is specially suitable for reproduction of fine half-tones, processed color, and other printing effects.

Old Colony Envelope Lines

A portfolio of Old Colony Envelope Company lines that Carter, Rice & Co. Corporation is distributing to the trade shows the large variety of designs suitable for use in sending out business greetings. The designs are very attractive, with some of them of the modernistic type or in keeping with the present day trend in art work. The electros are sold at cost to printers. Neither Carter, Rice & Co. Corporation nor the Old Colony Envelope Company desires to make any profit on these designs as they are prepared only with the purpose of helping the sale of Old Colony Announcements for business greeting purposes.

Paper Trade in Hoover Parade

The Boston paper trade was well represented in the Hoover Curtis torchlight procession in this city, November 2, with 300 in line. Major Walter M. Pratt, of the Pratt Paper Company, who was marshal, was active and untiring in connection with plans for the paper trade division, and received the hearty cooperation of all the committees. The sum of $500 was contributed towards the expenses. A small surplus which was left will be given to the Salvation Army.

Decision in Carthage Sulphite Paper Case

CARTHAGE, N. Y., November 5, 1928.—By decision handed down by Federal Judge Frederick H. Bryant in the income tax case in the matter of claims by the United States against Charles E. Norris, as receiver for the Carthage Sulphite Paper Company, both the plaintiff and defendant are winners. Judge Bryant disallows the claim of the government for 1917 amounting to $61,518,68 but allows the government's claim for 1918, 1919, 1922 and 1923 totalling $35,202.81.

The government brought action to recover additional income taxes from the Carthage Sulphite Paper Company totalling $96,721.49 asserting they had such additional taxes due from the following years. $61,518.68 for 1917; $10,419.75 for 1918; $24,022.26 for 1920; $190.80 for 1922 and $570 for 1923. The government held them as prior claims to claims of other creditors and payable before distribution to creditors. The above taxes were extra over and above what the paper company had reported and paid through the several years. Attorney Charles E. Norris was named receiver in the equity receivership matter January 14, 1924.

The receiver filed objections asserting the statutes of limitations had expired against the government and that certain waivers extending time of the government to enforce, signed by Guy C. Jones, as secretary and treasurer of the Carthage Sulphite Paper Company, were void. The matter was argued in Albany some time ago by B. F. Tompkins, Assistant United States Attorney General, Carl G. Walter, of New York City, as solicitor for the United States Mortgage and Trust Co. and Attorney Francis E. Cullen, of Purcell & Cullen, this city, for the receiver Charles E. Norris. Matter was argued before Federal Judges Frank Cooper and Frederick H. Bryant.

The claim of the government for 1917 amounting to $61,518.68 was disallowed on the grounds that the statutes of limitations and the waivers of Guy C. Jones, of Carthage, were ineffective to revive the claims. The government claims of 1918, 1920, 1922 and 1923, totalling $35,202.81, were allowed on the grounds the statutes of limitation had not run out as the waivers by Guy C. Jones were signed by the same person who signed the income tax returns in order to extend the time to the government.

The decision also allows the claims of the government as priority over all claims of creditors against the company excepting the receiver.

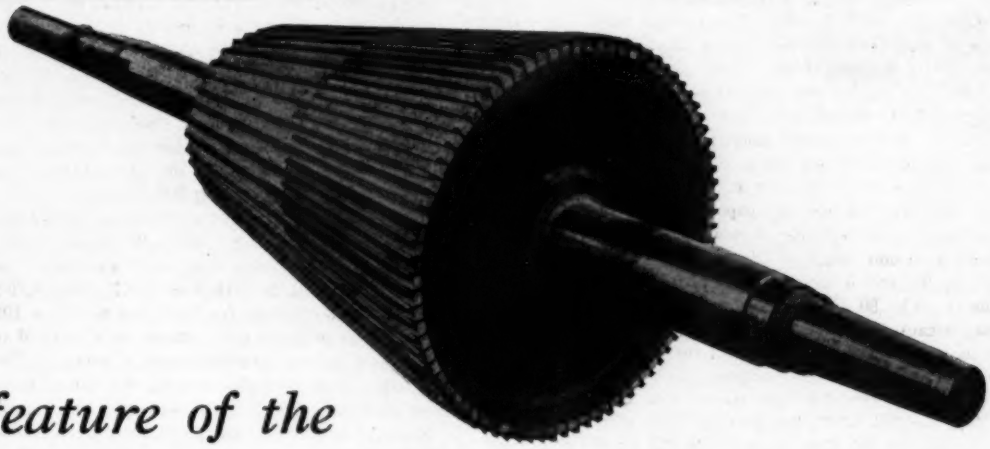
Now Schofield & Rees

PITTSBURGH, Pa., November 5, 1928.—The Edward A. Schofield Company, paper, paper products and specialties, with general offices in the Bessemer Building, was succeeded November 1 by Schofield & Ress, carrying on the business along the same lines and policies as established by Edw. A. Schofield, who retains the management, but is joined by Sigmund Ress, who for many years has enjoyed a large following as a successful salesman in the hotel and restaurant equipment business.

The business has consistently grown. The company has the cooperation of many of the leading manufacturers, and their confidence in Mr. Schofield has made it possible for it to expand. Mr. Ress brings to the business the real go-getter sales assistance, and the company promises even greater results.

The company operates a warehouse and branch at Erie, Pa., and contemplates the establishment of another at Newburgh, N. Y.

The New EMERSON
BANDLESS PLUG



A feature of the

EMERSON JORDAN

And Built for all Other Jordans

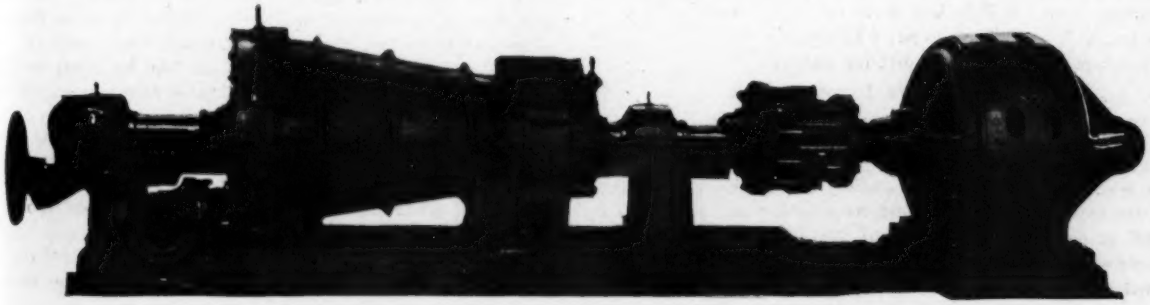
BODY is made of steel instead of cast iron.
DOVETAIL SLOTS are milled the full length of the body.
KNIVES are supported and locked in position their entire length.
WOODS are larger at the bottom than at the top and cannot lift and come out.

No lugs on the body, or ears on the knives, that can break.
No troublesome rings to shrink on.
Knives and woods are driven endwise and cannot become loose.

PROLONG THE LIFE OF YOUR FILLINGS
PREVENT COSTLY REPAIRS

MAY WE SEND YOU COMPLETE DESCRIPTION?

EMERSON MFG. CO., LAWRENCE, MASS.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Hoquiam, Wash.—The Hammermill Paper Company, Erie, Pa., has completed plans for its proposed new pulp and paper mill on site recently acquired at Hoquiam, Wash., for the production of bond and other high grade paper stocks, and will proceed with project at early date. General contract has been let to the Christopher Kupplers' Sons Company, Port Angeles, Wash. Plant will consist of a number of units, with power substation, machine shop and other mechanical units and is reported to cost more than $2,000,000, with equipment. Ernst R. Behrend is president and general manager.

Chicago, Ill.—The Bernard Paper Company, 401 West 18th street, is said to be planning early rebuilding of portion of its storage and distributing plant destroyed by fire, October 29, with loss reported in excess of $175,000, including equipment and stock.

Harrisburg, Pa.—The National Bank Service Corporation, M. L. Griswold, 45 West 45th street, New York, president, is said to be planning construction of new plant near Division street, Harrisburg, for the manufacture of paper stocks and other specialties for bank and financial service. Estimated cost has not been announced. It is said that an engineer will be selected to prepare plans at an early date.

Green Bay, Wis.—The Northern Paper Mills, Inc., Day street, has active construction in progress on its new three-story mill addition, 112 x 300 feet, brick and steel, and proposes to have structure ready for service at an early date. It will be used primarily for storage and distributing service. Miscellaneous contracts for completion are being let, including tile roofing to the Johns-Manville Company, and for two freight elevators to the Kieckhefer Elevator Company, both of Milwaukee. It will cost close to $130,000, with equipment. H. W. Gochnauer is company engineer, in charge.

Rockford, Ill.—The Rockford Paper Box and Board Company, Sayre and Francis streets, plans immediate rebuilding of portion of factory recently damaged by fire. An official estimate of loss has not been announced.

Marshfield, Ore.—The Sitka Spruce Pulp and Paper Company, recently organized with capital of $1,000,000, by C. McC. Johnson, Reedsport, Ore., and associates, is said to have plans maturing for early construction of new pulp mill at Marshfield, Ore., to be followed at later date with a paper mill unit. The initial project will consist of four operating units, including digester house, sulphite tank department, wet rooms and drying room, and acid towers. Equipment will be provided for an initial output of close to 50 tons per day. The entire project is reported to cost more than $250,000, with equipment, and is scheduled for completion about the middle of the coming year.

Eau Claire, Wis.—The Eau Claire Paper Products Company, lately formed by James C. Brown, 221 Second avenue, and associates, with capital of $50,000, is reported planning early operation of local plant for manufacture of commercial line of paper goods. Albert Spitzenberger, Eau Claire, is also interested in the new company.

Housatonic, Mass.—Interests identified with the Strathmore Paper Co., Mittineague, Mass., are said to have negotiations in progress for the purchase of the plant and business of the B. D. Rising Paper Company, with mill, Housatonic. The Board of Directors of last noted company is considering offer which has been tended and it is understood that early decision will be reached. Purchasing company proposes to continue operation of Housatonic mill as an individual unit for production of high grade papers, with possible expansion in present facilities. The plant has a rated output of about 15 tons per 24 hours and has been giving employment to about 300 persons.

Neenah, Wis.—The Wisconsin Carton Company is said to be planning construction of a new plant unit on Lake street, to be one-story, reported to cost more than $40,000, including equipment. B. C. Koepke is president.

Chicago, Ill.—The American Box Company, 4650 Iowa street, recently organized, is said to be planning early operation of local factory for manufacture of paper boxes and containers. The new company is headed by W. H. and Lawrence Reedy.

De Pere, Wis.—Fire recently damaged a portion of the mill of the Nicolet Paper Company. An official estimate of loss has not been announced but is reported as approximately $7,000. The damage will be replaced.

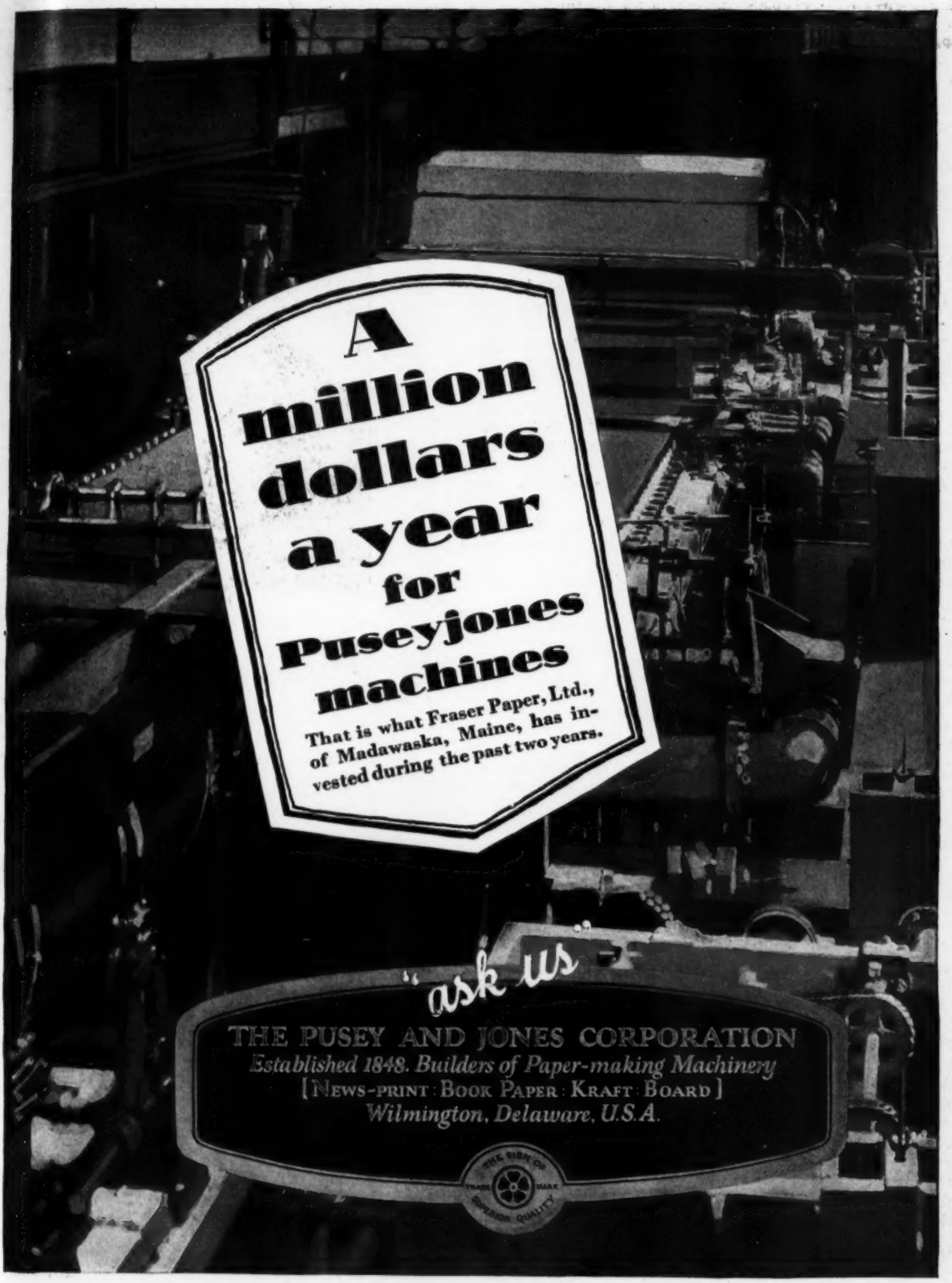
Indianapolis, Ind.—The Bethard Wall Paper Company, 419 Massachusetts avenue, has completed the reconstruction of its building at 415 Massachusetts avenue, two-story and basement, damaged by fire a number of months ago, and will occupy the structure at once. The rebuilding represents an investment of about $85,000, including facilities for storage, distributing and general operating service. W. J. Bethard is president.

Andover, Conn.—The Case Board Company has work under way on the rebuilding of its local paperboard mill and proposes to have the plant ready for service at an early date. As previously reported in these columns, the mill was destroyed by fire a number of weeks ago with loss estimated at close to $75,000, including equipment.

Joplin, Mo.—The Meeker Advertising Company, Third and Michigan streets, manufacturer of cardboard and other advertising novelties, has awarded a general contract to the Woods Construction Company for the erection of a new plant on local site and will proceed with superstructure at once. It will be two-story, reported to cost close to $80,000, with equipment.

Brooklyn, N. Y.—The Premier Carton Company, Inc., recently organized by Samuel Albert, 368 Van Buren street, Brooklyn, and associates, is said to be planning the early operation of local factory for the manufacture of folding paper boxes and kindred products. Benjamin Fried, 245 Rutledge street, Brooklyn, is also interested in new company.

Spokane, Wash.—The Inland Empire Paper Company has arranged for the construction of a new addition to its plant at Millwood, near the city, to be two-story, 60 x 140 feet, reported to cost close to $40,000, with equipment. It is understood that structure will be used primarily for storage and dis-


A million dollars a year for Puseyjones machines
That is what Fraser Paper, Ltd., of Madawaska, Maine, has invested during the past two years.
"ask us"
THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT : BOOK PAPER : KRAFT : BOARD]
Wilmington, Delaware, U.S.A.

tributing service. The Austin Company, Dexter-Horton Building, Seattle, Wash., is engineer and contractor for the work.

Toronto, Ont.—The Victory Paper and Twine Company, Ltd. has approved plans for immediate construction of a new storage and distributing plant on Fleet street, to be three-story and basement, brick, steel and reinforced concrete, estimated to cost close to $140,000, with mechanical handling and other equipment.

Sault Ste. Marie, Ont.—A project is said to be under way by a company in Canada for the construction and operation of a newsprint mill in the vicinity of Sault Ste. Marie, consisting of several units to be equipped for capacity of about 250 tons per day. The work will include a power house, dock and other construction. The American Consulate, Sault Ste. Marie, Bartley F. Yost, consul, has information regarding the project.

East Angus, Que.—The Pyramid Paper Products, Ltd. is said to be taking bids for the construction of proposed new one-story plant unit, 42 x 275 feet, to cost close to $50,000, with equipment, and will proceed with the project at early date. J. W. Gregoire, 86 Wellington Street North, Sherbrooke, Que., is architect.

New Companies, Etc.

New York, N. Y.—The Pacorwas Lumber and Pulp Exporting Corporation has been incorporated with capital of 100,000 shares preferred stock and 6000 shares common stock, to manufacture and deal in wood pulp. The company will be represented by J. P. Morgan, 132 Nassau street, New York.

Wichita Falls, Texas.—The Buchanan Stationery Company has been incorporated with a capital of $40,000, to manufacture and deal in writing papers, pads and other stationery products. The incorporators are C. Buchanan and R. B. MacDonald, both of Wichita Falls.

Indianapolis, Ind.—The Capital Paper Company, 225 West South street, has filed notice of increase in capital from $100,000 to $200,000, for general expansion.

Shelton, Wash.—The Rainier Pulp and Paper Company, San Francisco, Cal., with mill at Shelton, is arranging for the sale of a block of common stock, a portion of proceeds to be used for general financing and operations.

Indianapolis, Ind.—The Bowers Envelope and Lithograph Company, 618 Traction Terminal Building, has been incorporated with a capital of $100,000, and 1500 shares of common stock, no par value, to manufacture and assemble envelopes, mailers and other paper stock. The incorporators are Clyde A. Bowers, G. L. Wantz and W. Myron Yorger.

Pacific Northwest Paper Mills Expand

Construction is under way on a new addition to the plant of the Pacific Northwest Paper Mills, Inc., Portland, Ore., located at Rodney Avenue and Farragut Street. When this addition is completed the present output will be doubled, with twice the present number on the payroll.

This company is at present manufacturing a patented paper known as "Adwrap," an improved wrapping paper which is being widely accepted for merchandising parcels in retail establishments of all kinds. The Portland plant has been operating two years and is the home plant of the company. Branches for manufacture are maintained at Chicago and at Toronto, Canada.

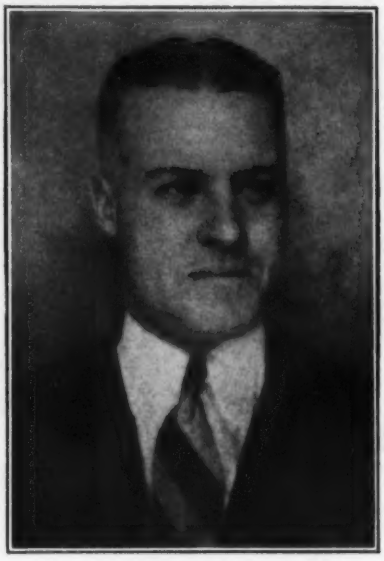
The new addition will give approximately 7,000 square feet of floor space and will employ 140 persons. The most modern equipment is to be installed, some of this being made in local shops and some shipped from the East.

D. D. Madden is president of the Pacific Northwest Paper Mills, Inc.; Coler Campbell, vice-president; L. R. Wells, secretary and I. C. Ulrich, treasurer. It is expected that the addition will be finished in November.

To Be Sales Manager of Allied Howard Mills

Howard R. Miller has been appointed eastern sales manager of the Howard Paper Company, Urbana, Ohio, and allied mills, the Aetna Paper Company, Dayton, Ohio, and the Maxwell Paper Company, Franklin, Ohio.

Mr. Miller entered the paper business in 1914 as a salesman for Charles F. Hubbs & Co., and with the exception of two years spent in naval aviation during the war, remained with them until February, 1922, when he became associated with W. C. Hamilton & Sons as their New York representative.



HOWARD R. MILLER

In May, 1924, Mr. Miller became assistant eastern sales manager of the allied Howard Mills, and he has now been appointed sales manager in the East, succeeding the late William H. Clark, his office being in the Court Square Building, 2 Lafayette street, New York City.

Visit Sorg, Oglesby and Smith Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 5, 1928.—Fifty-four members of the Dayton Branch of the National Association of Power Engineers were guests of the Sorg, Oglesby and Smith Paper Companies at Middletown the past week, the object of the visit being an inspection of the new power plant that serves the three corporations.

The visit was made at night as part of the educational tour of the Miami Valley.

Chief Engineer Tracy personally conducted the Daytonians through the power plant which is modern in every respect and occupies a substantial brick building centrally located for transmission of power to the various mills of the large concerns. Various kinds of paper are manufactured by the three mills and at times the power plant is severely tested.

The officers of the Dayton Association which was so well represented at Middletown, were H. W. Weyar, president; Thomas Garrett, secretary; William McIntosh, treasurer; and C. C. Frey, member of the booster committee, all of whom had a part in arranging for the trip to the Paper City solely to inspect the power plant, which is said to be recognized as the most modern in this section and one of the most complete in the United States devoted to supplying current and power to paper mills.

The Dayton group plans to continue its educational tours in Miami Valley mill centers.

PARSONS MADE IN U.S.A. ESTABLISHED 1853

PARSONS PAPER COMPANY
MANUFACTURERS OF
BONDS - LINENS - LEDGERS
HOLYOKE, MASS. U.S.A.

April 4, '28.

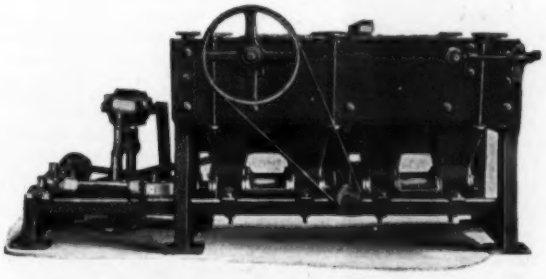
Carthage Machine Comoany,
Carthage, N.Y.

Gentlemen:

We are in receipt of Mr. A. K. Hinds' favor of the 4th in re the Pope flat screens and would say we have three (3) of these in use and find them very satisfactory; we consider them the best in the market.

Yours truly,
PARSONS PAPER COMPANY.
Roger W McCorkindale
Superintendent.

"We Consider Them the Best"



CARTHAGE
UNIVERSAL FLAT SCREEN

THIS statement by Mr. McCorkindale, Superintendent of Parsons Paper Company, Holyoke, Massachusetts, testifies to the success his company has had with the Pope Flat Screen —the predecessor of the New Carthage Universal Flat Screen.

It expresses the opinion of paper mill operators the country over for it tells why the Pope Flat Screen is so generally regarded as the outstanding screen on the market when judged from the standpoint of results.

Now we are announcing the New Carthage Universal Flat Screen which not only gives all the advantages found in the Pope Flat Screen but has been designed to achieve even greater simplicity, greater capacity and clearer, more uniform stock.

Write us to-day for free booklet and prices.

Carthage Machine Company

Manufacturers of Pulp and Paper Mill Machinery

Carthage, N. Y. Belleville, Ont., Canada

Power Plant Section

Reducing Power Costs Through Unit Treatment

Conducted by REGINALD TRAUTSCHOLD, Consulting Engineer

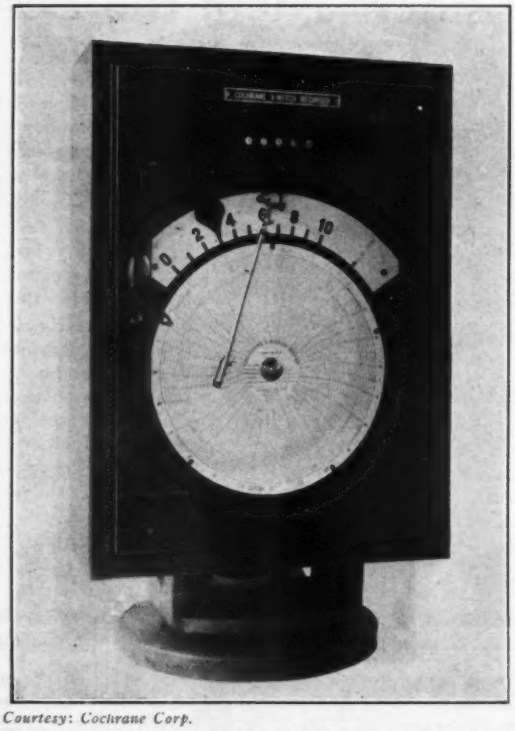
Modernizing the Mill and Power Plant

Instrument Controls in Paper Making

The essential nature of sensitive instrument control in the production of sulphite, soda and sulphate pulps was discussed in these columns on two previous occasions this year, the July 12th issue being given over to featuring the complement of instruments advocated for the sulphite pulp mill and that of August 23rd taking up an exposition of approved practices in soda and sulphate pulp mills. It would doubtless be of interest to go on with investigations of the advisable instrument controls in wood and rag pulp mills in much the same way, if it were not for the fact that in the refinement of these latter two varieties of pulps, the processes differ little from those practiced in the sulphite pulp mill, so entailing considerable unnecessary and for a complete story unavoidable repetition. Prior to these refining processes, of course, the production of the pulps entail their own distinctive steps, and these can be satisfactorily disposed on in an explanatory sentence or two, so far as the essential instrument control is concerned.

The preparation of ground wood pulp is, in fact, a purely mechanical operation, consisting in the main of feeding pulp wood by means of a pressure foot in a hydraulic cylinder against the revolving stones of the grinder. The control instruments employed in the efficiently operated mill consist of some kind of tachometer by which the speed of the stone is recorded, an indicating pressure and a temperature recorder for registering the temperature conditions of the pulp in the pit during cooling process.

In the preparation of rag pulp, the preliminary operations consist simply in sorting, dusting and cutting up the rags preparatory to subjecting the rag stock to a boiling process in a digester with milk of lime and caustic soda under moderate pressure. The parts played by the advisable instrument control consists of maintaining a suitable temperature and effective steam pressure conditions in the rag boiler. A temperature of around 250 degrees Fahrenheit is that found to give the best results and the working pressure is usually kept between 35 and 45 pounds. A recording thermometer and an indicating or recording pressure gauge are the instruments customarily employed, or else a combined temperature pressure recorder instrument.



Courtesy: Cochrane Corp.

RECENT DEVELOPMENT IN V-NOTCH RECORDER SUITABLE FOR MEASURING NOT ONLY THE FLOW OF WATER, ETC., BUT ALSO THAT OF PAPER PULP STOCK.

Instruments for Paper Mills

Essential and profitable as their use proves instruments to be in the process controls of these various methods of pulp production, however, they, or rather instruments of somewhat different class, are just as indispensable in the paper mill, if it is to be operated at maximum attainable efficiency and with due regard to quality uniformity in output. Consequently, these latter instruments, *i. e.*, those for paper mills, are very well worthy of consideration, for even a brief review of approved instrument practice in a modern paper mill will go far to explain how the truly remarkable progress made in mill operation during recent years has been brought about.

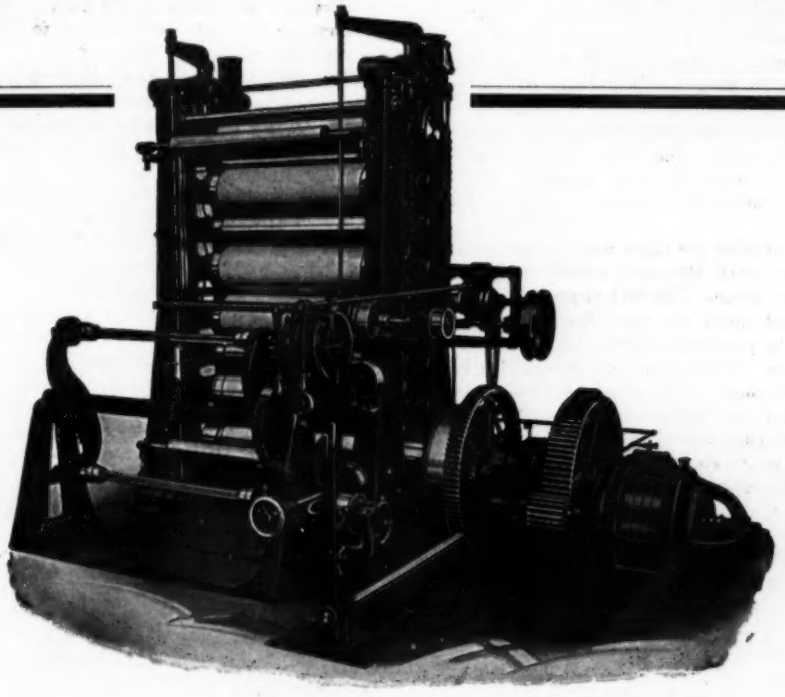
Conditions of volume, temperature pressure and other influencing considerations have been resolved to veritable precision standards by instrument control which have not been exceeded in any other commercial activity. The clock-like conduct of the up-to-date paper mill rivals, in fact, the attainments anywhere in the industrial field.

Control in Beater Room

The manufacture of paper commences in the beater room, where it is highly essential that the working charge to the beater be carefully measured and accurately controlled. The depth of the stock in the heater stock chest, for instance, is noted continuously and recorded by a liquid level gauge, so that sensitive control of the charge to the beater may be effectively realized. In like manner, if the beater is supplied with lap stock, the amount of such ingredient and, in color work, the filler constituent are recorded and when a rosin size is added, the storage tank containing the size is equipped with a recording level gauge.

In the preparation of the rosin size, before it passes to its temporary storage prior to being added to the beater charge, the use of a sensitive recording temperature gauge makes possible the maintenance of the proper temperature working range, an important consideration. The control of temperature in the beater is also necessary, for in the beating of pulp, its temperature during such process influences to a considerable extent the degree of hydration of the pulp and the final characteristics of

An Unusual Chance To Get Real Help!



YOU frequently run up against problems that are real stickers —that require a lot of hard thought, research and expensive experimenting before you can find a satisfactory solution. Yet, these very problems have probably come up in some other mill —and have been satisfactorily solved. What a Godsend it would be to the Company pocketbook and your own peace of mind if you knew the mills that had met and overcome the same problems, and had the benefit of their experience.

This is precisely what you can have—for the mere asking. Norwood's men have been developing and building paper mill machinery for close to 40 years. During this time they have naturally acquired a vast knowledge and experience in meeting varied conditions of mill operation. They have run up against most of the problems in the filtration of water and the finishing of paper, and have had a hand in their solution.

Coupled with this valuable experience has been a constant growing of the Norwood spirit of co-operation, which is a simple but important basic policy with us. Here's how it works: You want the real dope on some particular problem. Maybe you want to know how much money you can save by motorizing your platers, or possibly you are having trouble with pollution of the water entering your plant, or have some other problem dealing with water filtration or involving calenders, platers, dusters, suction boxes, dampeners or brushing engines. Just write, 'phone or wire us and give us the details. We'll give you the full benefit of our experience, wholeheartedly, and if the urgency and importance of your problem warrants it we'll quite likely send an engineer right away to go over the whole problem with you.

You Can't Go Wrong With a Norwood Installation of

Filters
Calenders
Platers
Dusters
Rag Thrashers
Folding Machines
Suction Boxes
or other equipment

Catalogs, Illustrations and Specifications on Request.

This is Norwood Co-operation. We give it to you freely—not because we are altruistic—but because we've spent the last third of a century working with paper mill men, and we know that if you are thinking of replacements or need additional equipment you'll select the best equipment for your purpose. The best is naturally Norwood—built on experience to stand the gaff and give long and satisfactory service.

Norwood Engineering Company, Florence, Mass.

NORWOOD

the paper into which it is converted. The chief danger to be guarded against is the development of too high temperature during the process, somewhere around 100 degrees Fahrenheit usually giving the best results. In color work, however, nearly twice this temperature is found expedient at times in order to insure the thorough cooking in of the color pigment. Finally, the beater should be provided with a recording liquid level gauge for calibrating the depth of the charge being worked.

From Beater to Paper Machine

From the beater, the stock is dropped into the Jordan stock chest where it is advisably again measured by means of a recording liquid level gauge. It then passes to the Jordan for its final refining and from the engine is discharged to the machine stock chest and is there once again measured by means of another recording liquid level gauge. This latter instrument not only records the output of the Jordan engine, but serves to measure the stock taken by the wet end of the paper machine. The water supply, incidentally, is regulated by means of a suitable pressure gauge.

Passing on to the wet end of the paper machine, the pulp flows onto the travelling wire screen, the surplus water (white water) draining off through the screen. This de-hydration is accelerated by suction boxes located under the wire, for which indicating vacuum gauges should be provided, in order to insure and regulate this essential process. The suction roll should also be supplied with a similar instrument. The reclaimed white water, usually subsequently used in the beaters in order to minimize the necessary fresh water supply, should be measured as it collects and again in the white water storage tank as it is withdrawn to charge the beater. Approved practice is to utilize recording liquid level gauges in making these calibrations.

The wet web continuing on the felts pass over a series of heated dryer rolls, in which a partial vacuum is maintained in order to expedite the process. The moisture in the sheet is controlled by the drum temperature and the provision of a recording thermometer furnishes the information essential for the proper maintenance of the critical temperature. This is very important, for the maintenance of the proper dryer roll temperature exerts much influence upon the quality of the paper produced. Also, a recording vacuum-pressure gauge with an independent registering pen for each dryer section is essential for securing satisfactory quality and uniformity of output.

The moisture evaporated by the dryer rolls is usually drawn off through hoods by means of exhaust blowers and to hasten the removal of the moisture the machine room is very advisably ventilated by a supply of heated air. In order to maintain those uniform conditions so very essential in economical and efficient paper making, the temperature of the air supply should be under sensitive instrument control, calling for the installation, as a rule, of a modern temperature recorder-controller instrument.

While the final "finish" is given to the paper by the highly polished calender rolls, it is quite essential that the surface of the paper entering the calender carry a definite and constant amount of moisture. It is the province of the sweat rolls to supply this, *i. e.*, draw the moisture to the surface, for even if the moisture in the sheet is constant when it leaves the dryers the uniform finish in the calender stack cannot be secured without the surface moisture. Consequently, a record should be maintained of the sweat roll temperature in order that this critical temperature be under sensitive control by the regulation of the cooling water entering the roll.

Before calendering, certain grades of paper are passed through a surface size solution, made up of melted glue and gelatin and kept at a constant temperature. There is also a critical temperature in the preparation of this size, so a recording thermometer, or, better, a temperature recorder-controller instrument of suitable working range should be provided to regulate the size preparation and a similar instrument of somewhat lower working range for the size tub.

The surface sized paper is dried by being passed over another nest of dryer rolls or else is dried in sheets in a dry loft. In either case, the best results are to be secured when both temperature and humidity conditions are subjected to sensitive and close regulation, entailing the provision and use of a so-called recording psychrometer, or humidity recorder-controller.

Such an instrument is also eminently suitable for use in close regulation of temperature and humidity in the machine room. Still another place where the psychrometer instrument can be advisedly employed is in the finishing room where the sensitive control of temperature and humidity can be very profitably exercised, both to improve working conditions and for its effect upon the quality of the mill output.

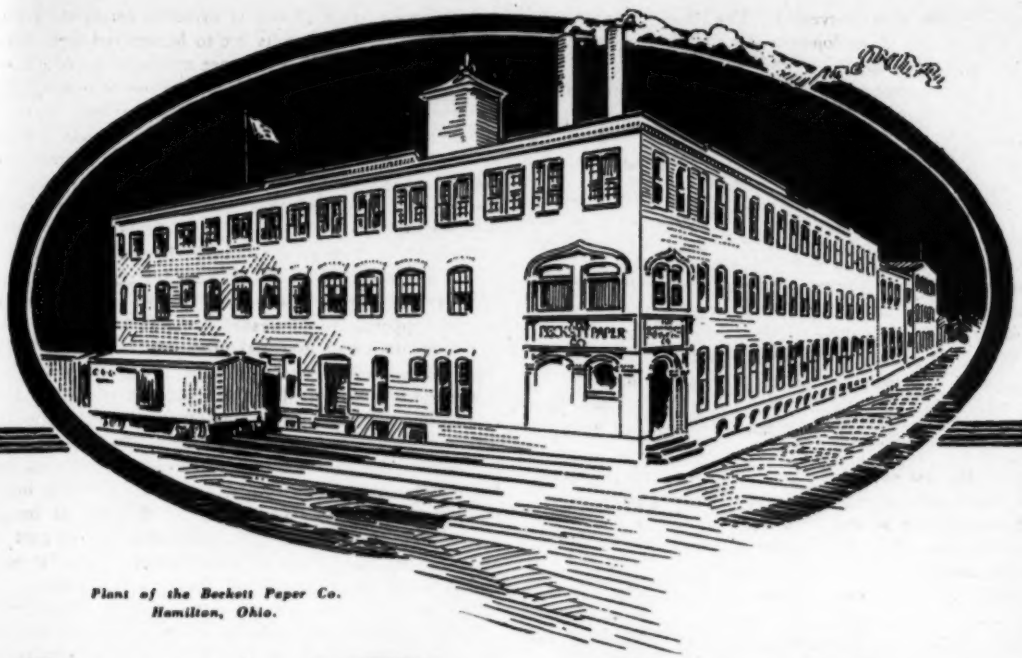
Those mills which make up wax paper are confronted with still another opportunity of resorting to instrument control practice in the regulation of essential production processes. The paper is made by passing the stock through a vat of melted paraffin held at a carefully controlled temperature and paper has to be wound into rolls directly because the paraffin solidifies almost immediately upon the withdrawal of the paper from the wax vat. Not only is it imperative to maintain a suitable and constant vat temperature, for which service a recording thermometer is an important adjunct, but the automatic control of the critical temperature is highly desirable. Under such circumstances, the part of wisdom calls for the installation of a temperature recorder-controller instrument operating over a relatively narrow range.

To round out an advisable complement of instruments for the sensitive control and regulation of the paper making processes of the modern paper mill, two more instruments may be mentioned. The first of these is an electrical time recorder for noting and posting the operating time of the paper machine. The second, a revolution counter for the layboy in recording stock shipments.

COMPLEMENT OF CONTROL INSTRUMENTS FOR PAPER MILLS

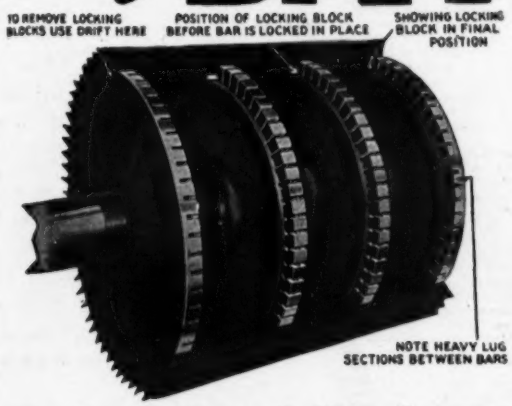
Service and Instrument	Recommended Working Range [1]
BEATER ROOM	
Beater Stock Chest—Depth of stock Recording liquid level gauge	0 to 10, 15 or 20 ft.
Rosin Size Preparation—Temperature Recording thermometer	180 to 225 deg. Fah.
Rosin Size Storage—Depth of stock Recording liquid level gauge	0 to 8 or 9 ft.
Beaters—Depth of stock Recording liquid level gauge	0 to 4 ft.
Beaters—Temperature Recording thermometer	50 to 150 deg. Fah.
Jordan Stock Chest—Depth of stock Recording liquid level gauge	0 to 10, 15 or 20 ft.
MACHINE ROOM	
Machine Stock Chest—Depth of stock Recording liquid level gauge	0 to 10, 15 or 20 ft.
Suction Box—Vacuum Indicating vacuum gauge	15 to 25 in. mercury
Suction Roll—Vacuum Indicating vacuum gauge	10 to 25 in. mercury
Water Supply—Pressure Indicating pressure gauge	20 to 40 lbs.
White Water Wier Measurement—Depth Recording liquid level gauge	0 to 6 in.
White Water Storage—Depth Recording liquid level gauge	0 to 10, 15 or 20 ft.
Dryer Roll—Vacuum-Pressure Multi-pen recording gauge	15 in. vac. to 10 lbs.
Dryer Roll—Temperature Recording thermometer	200 to 250 deg. Fah.
Sweat Rolls—Temperature Recording thermometer	
Paper Machine—Operating time Electrical time recorder	
Machine Room—Temperature and humidity Recording psychrometer	70 to 100 deg.
Air Supply System—Temperature control Temperature recorder-controller	70 to 140 deg.
Tub Size Preparation—Temperature Recording thermometer or temperature recorder-controller	150 to 180 deg.
Size Tub—Temperature Recording thermometer or temperature recorder-controller	95 to 145 deg.
Dry Loft—Temperature and humidity Recording psychrometer	70 to 130 deg.
Waxing Machine—Temperature control Recording thermometer or temperature recorder-controller	140 to 150 deg.
FINISHING ROOM	
Temperature and Humidity Recording psychrometer	70 to 100 deg.
SHIPPING ROOM	
Lay-Boy Revolution counter	0—999,999

[1] Advocated by The Foxboro Co., Inc.



Plant of the Beckett Paper Co. Hamilton, Ohio.

Speed Production *With* DAYTONS


TO REMOVE LOCKING BLOCKS USE DRIFT HERE
POSITION OF LOCKING BLOCK BEFORE BAR IS LOCKED IN PLACE
SHOWING LOCKING BLOCK IN FINAL POSITION
NOTE HEAVY LUG SECTIONS BETWEEN BARS

The Dayton Beater & Hoist Company
Dayton, Ohio
E. K. Mansfield Co., 501 5th Ave., New York, N. Y.

Securing a new customer may be a tribute to the salesman, but receiving that customer's repeat order is a compliment to the product itself. For which reason we announce that approximately 80% of the nearly 400 Dayton High Speed Beaters now "speeding production" in some seventy odd mills represents repeat business—a truly wonderful tribute to this particular product.

Incidentally there are more Daytons in the mills of America and Canada than the entire field of competitive high speed builders can account for—further evidence that the Dayton ACTUALLY DOES dominate.

Entirely new equipment or old type engines reconstructed

GET THE FACTS

DAYTON

HIGH SPEED BEATERS

is also necessary, for in the beating of the pulp, its temperature during such process influences to a considerable extent the degree of hydration of the pulp and the final characteristics of the paper

Other Instruments

Doubtless, there are a number of other instruments which can advisably be employed in the paper mill to expedite production, guard quality and cut operating costs. Today, it would be the height of temerity to venture an opinion as to how far the instrument control of paper aking processes can be carried with profit. One thing is certain, however, and that is that the complement of control instruments here recorded, while it doubtless may appear quite formidable to the average paper mill, is well justified on economic grounds. Every instrument mentioned will effect some worthwhile saving, direct or indirect, when employed in the service suggested.

In the sketchy portrayal of the mill processes, furthermore, no attempt has been made to advance a standard for paper mill operation, or even to submit a picture applicable in all respects to any paper mill, but rather to point out critical locations at which instrument control can be profitably instigated. In the majority of instances, the instruments serve only to supply the information required for the operatives to be able to discharge their responsibilities to the best advantage. A thermometer of the simple indicating type, for example, will not prevent the temperature from rising too high or from falling below the desired point. It does register the proper temperature when it pertains, however, and provides the information which enables the operative to regulate the supply of heating medium as may be required. Other instruments work automatically, not only recording conditions as they exist, but discharging the necessary functions for close regulation.

Future Developments

Future progress and development in the line of instrument control is very certain to be along the line of automatic operation for the controls and even today considerable advance has been made in this direction. It behooves the alert mill, consequently, to keep an open eye on the developments in the instrument field with the view of adopting refinements in automatic control and graphical records to its various production processes no matter how successfully they, *i.e.*, the processes, may appear to be regulated by manual or semi-automatic control at the present time.

Also, and this trite comment is well reserved to the end; due appreciation of the value of calibrating instrument records should be assiduously cultivated by every mill striving to hold down its production costs. Meter and recorder charts are invaluable in this connection and every now and then new and approved recorders are developed which are of particular and distinctive value to the paper making industry when mills are conducted according to the modern lines of placing the utmost dependence on instrument control. For example, there is a new form of recorder now procurable for use with V-notch and other forms of wiers. It is adaptable to the measuring of water and also paper pulp.

Should Keep in Touch With Field

This is but one of the more recent developments in instrument control and the recording of calibrated readings of various kinds and simply emphasizes the advisability of the wideawake mill keeping in very close touch with what the instrument manufacturers are accomplishing in mechanical control. In no other field are greater opportunities to be found of realizing very substantial savings on comparatively minor investments.

Dependable instruments for regulating the conduct of almost any process in the production of pulp and paper invariably pay for themselves in short order by savings their use effects, and prove indirectly, by their depiction of the exact existing conditions, among the most potent of insurance safeguards which can be instigated. They may well be termed the eyes of the industry and be valued accordingly.

Waterways Need Forests

"One of the longest strides ever taken by this or any other state in the solution of its land problems, looms at an early date through drafting of legislation following the report of a commission that studied the forestry situation in New York this summer," said Dean Franklin Moon of the New York State College of Forestry, Syracuse University, at the annual meeting of the New York State Waterways Association recently held in Rochester. "The investigation is the result of a bill introduced by Senator Charles W. Hewitt last year and signed by Governor Alfred E. Smith."

Dean Moon pointed out the success of European countries in the profitable employment of waterways. He referred to the problems with which we were already confronted in this country in relation to sedimentation in dams, river basins, canal beds and canal feeders. Sedimentation is almost always caused by erosion of soil from deforested areas in mountainous or rolling regions. Dean Moon referred to the amazing situation recently disclosed in New York by farm economists.

"From 1880 to 1920," said the Dean, "four million acres of land once farmed and pastured were abandoned, an average of 100,000 acres a year. From 1920 to 1925 one million, three hundred thousand acres were abandoned, an average of 272,000 acres a year.

"While it is undoubtedly true," he said, "that some of these abandoned areas may again produce farm products at a profit, owing to better transportation and more skillful agriculture, the fact remains that we now have an area of five million, three hundred thousand acres of abandoned land. To make this area again productive would do much to strengthen the agricultural situation, improve runoff, rehabilitate our vanishing wood-working industries, reduce the big annual freight bill on timber from other states, and provide income locally." Dean Moon added that only one-third of the factories, drawing upon the forests for raw material, in operation in 1913 are now to be found in the State, and that the serious problem of migrating industries was confronting the secondary wood-using plants.

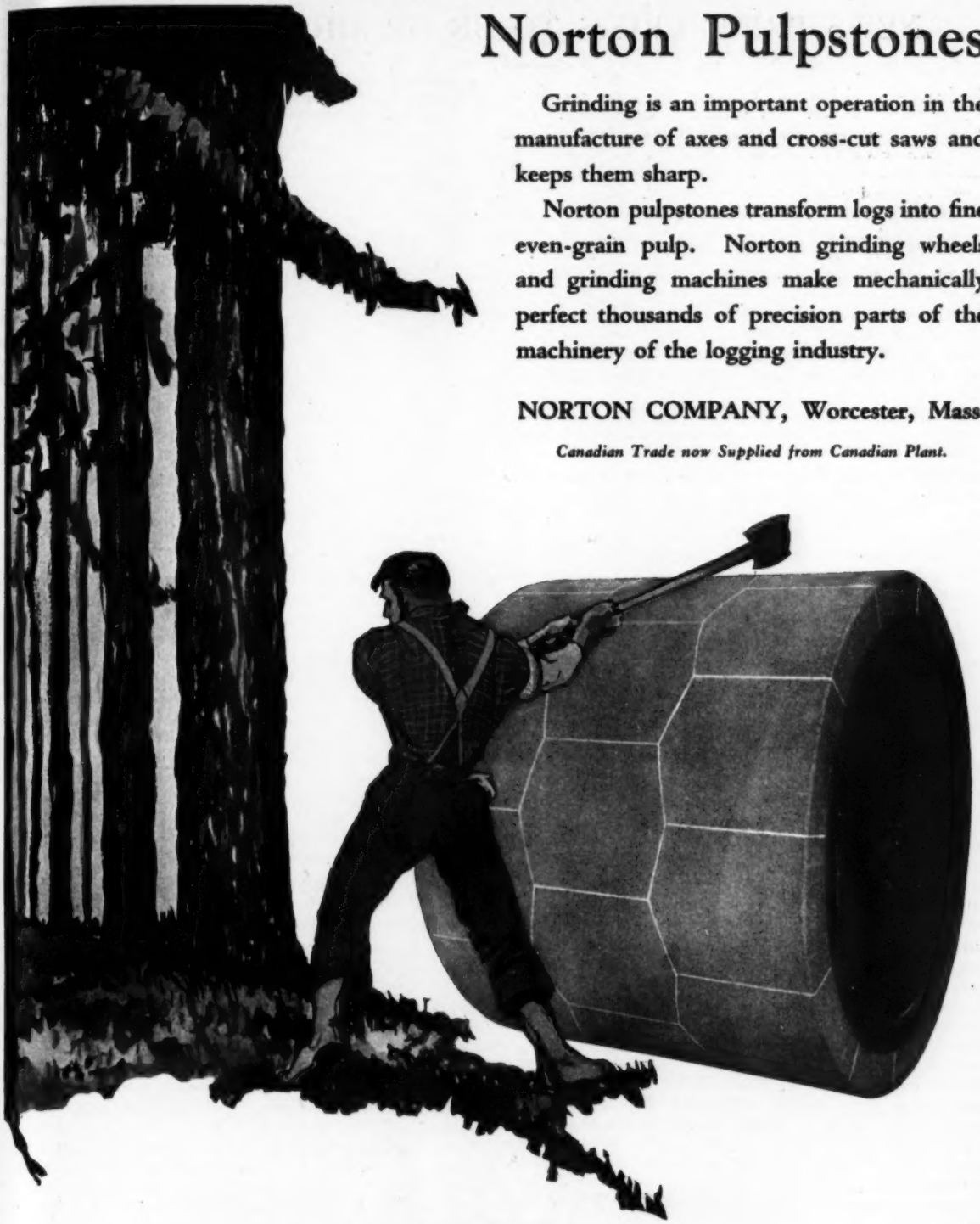
Dean Moon called attention to the "vast urban and suburban belt" that stretches from the Bronx up the Hudson to Albany, Syracuse and Buffalo, a continuous city of the future and he said that "of all the products which the forests yield—structural timbers and furniture for our homes, pulp stock for daily papers, books and magazines,—water will be the most priceless forest product and absolutely essential to that great centralization of people."

A. P. W. Paper Co. Asks Lower Rates

ALBANY, N. Y., November 1, 1928.—The A. P. W. Paper Company, of this city, thhrough Donald G. Kibbey, traffic manager, has petitioned the Interstate Commerce Commission for relief from what is termed unfavorable rail rates out of Albany eastward and northward on the New York Central Railroad. The company requests a lower tariff on wood pulp shipments east and north from this city.

Mr. Kibbey appearing recently before the commission at Washington contended that Albany's location at a port is sufficient grounds for granting the lower rates. He spoke of the plans of the company for increasing its business as a pulp importer saying that next year the company will bring sixteen ocean carriers to Albany with wood pulp from its pulp mills at Sheet Harbor.

The A. P. W. Company has been bringing in pulp cargoes in ocean steamers for the past two or three years, part of this pulp being used in the Albany plant and the remainder sold to paper mills in Northern New York and Western Massachusetts. Mr. Kibbey said that the company could still further enlarge its inbound water shipments if rail distribution could be made at more favorable terms. He said that the pulp mills of the company at Sheet Harbor, Nova Scotia, produce more than 50,000 tons of wood pulp annually and of this only 20,000 tons come to the Albany plant.



Norton Pulpstones

Grinding is an important operation in the manufacture of axes and cross-cut saws and keeps them sharp.

Norton pulpstones transform logs into fine even-grain pulp. Norton grinding wheels and grinding machines make mechanically perfect thousands of precision parts of the machinery of the logging industry.

NORTON COMPANY, Worcester, Mass.

Canadian Trade now Supplied from Canadian Plant.

Grinding Wheels
Grinding Machines

NORTON
PULP STONES

Refractories - Floor
and Stair Tiles

NEWS PRINT CRISIS TO BE OF SHORT DURATION

(*Continued from page 27*)

preciation and bond interest. A cut of $15 per ton from the $65 price therefore more than wipes out the earnings. Price Bros. & Co., in offering a profit-sharing price on a cost-plus basis to their customers a week ago, definitely stated that the total costs would not amount to more than $56 per ton, made up of $42.50 for mill costs and $13.50 a ton for overhead. Recently it was rumored that Price Bros. & Co., Limited, had concluded a contract with Lord Beaverbrook's British publications for 100,000 tons of news print next year at $48.50 per ton ex-mill. This relatively low price will not seem out of line now that the break has come in the trade generally.

The Hearst contract is said to have been the snag on which the trade craft struck and it is generally accepted here that as that publisher will obtain his news print paper for $50 this rate will prevail so far as other American publishers are concerned.

It is understood that International Paper has secured the Hearst contract and will immediately place the big plant at East Templeton on full time. The announcement late last week that Abitibi would start up three machines of the Spanish River division which had been closed down for some time owing to the necessity of curtailment due to over-production, was at first believed to have been the result of an arrangement by which that paper producer will supply the *Chicago News*, a contract which was formerly taken care of by International. This was presumed to be the result of a "dicker" which will work out advantageously to both companies.

Statement From Alexander Smith

However, Alexander Smith, president of the Abitibi Power & Paper Company, after the regular monthly meeting of the directors of that company here gave out the following statement: "There is no truth in the statement that Abiibi has acted with or under any understanding with the International Paper Company in reference to the *Chicago Daily News* contract or any other contract, or in any other way whatsoever."

The *Montreal Gazette* says this statement is pregnant with meaning, remarking:

"The machines which have been replaced in operation are in the Spanish River mills and they have been shut down for some time in conjunction with the effort of some Canadian producers to limit output to the extent that further reductions in the price of news print might not be necessary. In the meantime conditions incident to a material over-production of news print paper caused something approaching a panic among some of the independent companies and they have gone ahead regardless of what the effect might be upon the industry as a whole and sold up their entire capacity output, in some instances, it is said, for a number of years and at contract prices which have represented material concessions from the present nominal figure.

"It is hardly to be wondered at that Abitibi, or any company which had been curtailing production should, under such circumstances, try to catch markets which were slipping away from them and hang on until the natural increase in consumption creates a better balance in the news print market. Nor, under the circumstances, can great blame be attached to those companies which have taken the bull by the horns, time by the forelock, etc., and sold their output where they could at the best prices obtainable."

Hon. L. A. Taschereau on the Crisis

Hon. L. A. Taschereau, premier of Quebec, has made a striking contribution to the discussion on the news print crisis. Stung by the criticisms of the *Montreal Star* (reproduced above), he denies that "shortsightedness and reckless improvidence" by the Quebec government in licensing pulpwood limits, brought over-capacity, over-production, and a crisis in the news print industry. On the contrary, he declares that for the past three years his government has done everything possible to curtail the output of Quebec mills, and he makes the important announcement that at last the governments of Quebec and Ontario are on the eve of conferring together, and of meeting mill owners, again to take up the over-production question. He quotes public statements made by him from 1925 on to show that he realized the danger and adopted a policy in accordance. Realizing that a crisis was at hand, he says:

"I took, this summer, the initiative in calling a meeting of the interested parties. For several reasons, one of which was the absence of the Hon. Mr. Ferguson, Premier of Ontario, this conference has not yet been held. Yet, no time has been lost by us in gathering the necessary information and data, so that we will know when we meet the manufacturers, what is the real situation and be able to discuss the suggestions made to remedy the situation. I have reason to believe that the conference will soon take place. I may say immediately that no influence has been brought to prevent its taking place, notwithstanding the rumors that have been circulated in various quarters. The delays which have taken place were due solely to circumstances which we could not overcome."

Premier Taschereau proceeds: "It is utterly false that, month after month, the Quebec Government advertises the sale of timber limits. As a matter of fact, the last important auction took place on the 29th of July, 1926. One of these sales involved the building of a paper mill on the Mistassini river, because we expected to be able thus to realize the desire of the population established to the north of Lake St. John, to have the belt line around their lake completed. A year ago, the Dolbeau mill started its operations and is now working at full capacity. It has given birth to the town of Dolbeau. The railway trains connect regularly this town with the remainder of the C.N.R. system. Thus, nobody can blame the Government for this measure, which was urgently needed and which has brought so much improvement to that section. Other leases at that time were only made to complete the wood supply of existing companies. Since March, 1926, only small timber limits have been leased and this was done mostly for the upkeeping of saw mills rather than for the erection of new paper mills.

"To be fair, it should also be remembered that the province of Quebec has not the monopoly of the production, that the other provinces have not all taken the same steps as Quebec and that, if the new mills or additions to existing mills are projected, it is not mainly in our province.

Quebec Produces 50 Per Cent of Total

"The province of Quebec produces 60 per cent of the total production of Canada's newsprint. In 1929, only two new machines are projected in this province, whereas in Ontario 4 other machines are expected, 2 in New Brunswick, 2 in Nova Scotia, and a few more in Manitoba. Newfoundland is also a large producer, which adds greatly to the present overproduction."

In conclusion Premier Taschereau makes public an interesting list of proposed new pulp and paper developments which his government has refused to sanction. His statement in this connection is as follows:

"I will add that within the last few years not only have we not favored the building of new mills, but we have repeatedly adjourned new demands and refused to put up at auction large areas of timber lands which we were very much pressed to sell.

"I will specially refer to the following cases:

"E. A. Wallberg, at Dolbeau.

"John Stadler, Nottaway.

"Compagnie de Pulpe de Chicoutimi, Mistassini.

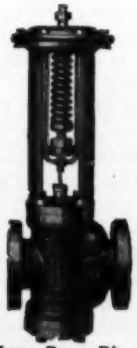
"St. Regis—North Shore.

"Canadian International Paper Company, Megiscan and Pentecost.

"Howard Smith—River Harricana.

"Wayagamack Paper Company—Portneuf.

"We've decided to standardize on Mason Regulators, Bill"



Mason Pump Discharge Pressure Regulator

"Since we started putting them in the lines around the mill, we've had less trouble, the reduced pressures stay where they're set and the Chief says we're using less steam."

There is a Mason Regulator for every kind of pressure control. Each one is carefully tested to meet the most exacting conditions of service and their accuracy does not diminish with long, continued use.

Write for a copy of newly revised Catalog No. 62, which gives a complete description and prices of Mason Regulators for every pulp and paper mill service.

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San Francisco Office, 606 Howard Street

Mason Regulator Company of Canada, Ltd., 686 Notre Dame St., West, Montreal

"Eastern Lumber Company—Natashquan.

"Price Brothers—Ste. Marguerite.

"A large development was to have taken place at Riviere-aux-Outardes. We have extended for a period of three years the delay in the construction of a paper mill, so that this new undertaking should not add to the present overproduction.

"What more can we do?"

Will Bring News Print Interests Together

The general opinion is that while there is no hope of a general appreciation in news print prices for a long time, present events will go far towards bringing news print interests together and hastening the time when the industry will be controlled by two or three big corporations.

Three big pulp and paper enterprises in British Columbia are being held up by the present uncertainty in the outlook. They are those of the Crown Willamette Pulp and Paper Company of California and Oregon, the Canadian Forest Products, Limited, and eastern financial interests who propose to build a large mill near Prince George. The Crown Willamette plant is to be located on the Campbell River, Vancouver Island, and Canadian Forest Products, Limited, backed by the International Harvester Company to the extent of $16,000,000, is planning a mill at Nimpkish River. All these projects will utilize important waterpowers that are dormant at present and they will add enormously to the paper production of British Columbia. The ultimate capacity of these three plants will add about 3,000 tons to the daily output of paper in the coast province.

British Paper Imports Fall

WASHINGTON, D. C., November 7, 1928.—Imports of paper making materials into the United Kingdom during the first nine months of the current year show a decrease of approximately 15 per cent in volume and 25 per cent in value as compared with the corresponding period last year, according to the Department of Commerce.

Imports of mechanical pulp, which represent roughly one-half of these imports, dropped off by 15 per cent; imports of chemical pulp, which represent somewhat over one-third declined 19 per cent; and esparto and other vegetable fibers, linen and cotton rags, and other base stocks declined by nearly 3 per cent.

At the same time both the export and import trade in paper and boards slightly exceeded last year's business. Imports of uncoated printing papers and writing papers in large sheets, packing and wrapping papers, and boards, which make up the bulk of the incoming shipments, increased by 12, 6, and 8 per cent respectively, while exports show gains of 5, 12, and 28 per cent.

Total paper and board receipts during the first nine months of 1928 were valued at $59,840,900 as against exports valued at $33,392,600 during the same period. Each of these amounts represent an increase of 3 per cent over trade during the corresponding period in 1927.

Government Grading of Rosin

Rosin producers are seeking an extension of the grading done by the Food, Drug and Insecticide Administration of the United States Department of Agriculture under the naval stores act, according to Dr. F. P. Veitch, in charge of this work, who recently returned from a trip to the naval stores producing section of the South. Several producers who have not yet availed themselves of the opportunity of having their rosin graded by the Government graders informed Doctor Veitch that they intended to ask for Federal grading at their plants when the new season opens.

The Federal naval stores act provides for the grading and classifying of rosin by the Government, the expense being borne by the producer, shipper, consumer, or other interested party requesting it. Many consumers stated that they now obtain more nearly what they desire as a result of this inspection, and producers also have voiced their satisfaction over the elimination of claims by purchasers that were made before uniform grading began.

Pacific Logging Congress Discusses Pulp

PORTLAND, Ore., November 1, 1928.—When the Pacific Logging Congress convened for its important sessions October 24-27 at the Oceanic Terminals, matters of interests to the pulp industry were included on the programs.

J. J. Donovan, lumberman of Bellingham, Wash., told the assembly of the need of tariff protection against European pulp which is being dumped on the market, he stated, at less than the cost of American production. Something must be done about this by those interested in the paper industry in the Pacific northwest, Mr. Donovan told the delegates.

"The United States consumes nearly 10,000,000 tons of paper annually—considerably more than other countries of the world combined," Mr. Donovan said, and the increase in this consumption in terms of pulpwood means approximately two cords to the ton. But we are importing nearly one-half our consumption in news print, finished paper, all grades of pulp and some pulp wood.

Further remarks of Mr. Donovan follow:

"The three states of Washington, Oregon and California, possessing one-half of the standing timber, and nearly one-half of the water power of the country, produce only 8 per cent of the pulp wood.

"The question immediately arises, why these enormous imports of pulp and paper when it is possible for the three Pacific states to produce it? The answer is that eight years ago when the tariff bill was framed the great newspapers, publishing houses and political farmers united to strip the wood industries of any vestige of protection. Lumber, shingles, pulp, pulpwood and news print were placed on the free list, in the name of conservation—a false cry.

"The result is depression in these industries at home and the importation during the current year of about $400,000,000 worth of these products, three-fourths of which could have been produced at home. When the next tariff bill is drawn in 1929, these industries will be heard from in congress or know the reason why. Pulp makers will have an especially clear case."

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 5, 1928.—Col. J. P. Jordan, of the Jordan Card and Paper Company, 82 years young, caught the largest number of smelts of any in a two-boat-load party in Hingham Bay last Friday.

Fred H. Thomas, salesman for the Robert Gair Company at 38 Chauncey street, underwent a serious operation on Friday. He is doing as well as could be expected.

B. C. Spaulding, secretary of the Baird & Bartlett Company and Mrs. Spaulding recently passed a week-end at Mr. Spaulding's old home, Richmond, Me.

The S. D. Warren Company has added several large Seybold mill trimmers to the equipment of the plants at Cumberland Mills, Me.

The E. P. Lawson Company has installed a large modern Seybold mill trimmer at the Benton Falls Mill of the United Paperboard Company at Benton Falls, Me.

The White & Wyckoff Manufacturing Company, Holyoke, Mass., is establishing a branch at Davenport, Iowa, but will continue to have the main office at Holyoke.

Increased Rates on News Print Fair

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 7, 1928.—The proposed increased rates on news print paper, in carloads, from Lake Charles, La., to Shreveport, Monroe, and Ruston, La., have not been found justified by the Interstate Commerce Commission in an investigation which has just been completed by it.

The suspended schedules have been ordered canceled and the proceeding discontinued, without prejudice to the filing of new schedules in conformity with the views expressed in the opinion.

labor

costs less when beaters do more

You have to have practically the same number of men for a slow moving Hollander of limited capacity that you do for a modern Mid-West Hi-Speed Beater that turns out three times the amount of stuff. The mathematics of the proposition is simple. Figure how much that would mean on your production costs.

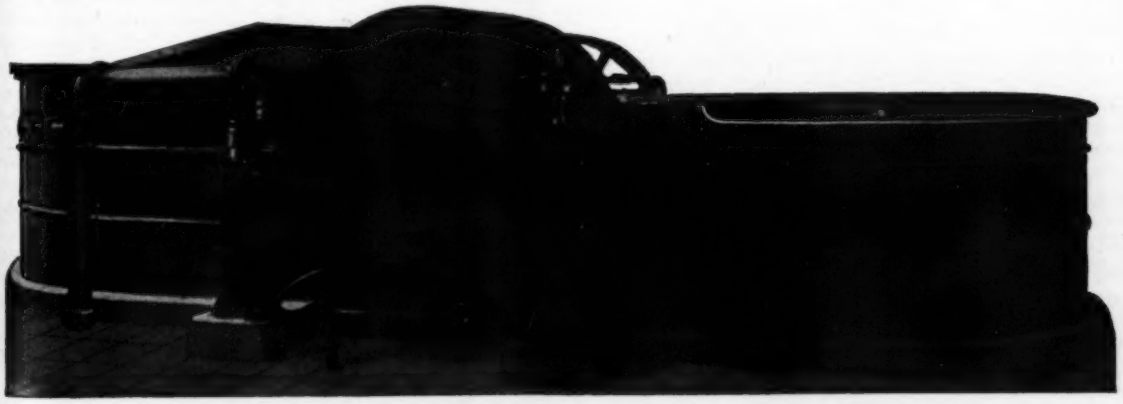
The saving in labor is but one item that helps cut production costs when Mid-West Beaters take the place of the old, slow-moving style of beater with its limited capacity.

Power costs and upkeep come down. Production goes up. There is more margin for profit and to meet competition.

The facts that demonstrate the savings possible in your mill, are facts worth asking for. Write for them.

THERE IS A WORLD OF DIFFERENCE IN BEATERS

THE MIDWEST MACHINE CO. DAYTON, OHIO



MID-WEST PAPER MILL MACHINERY

New York Trade Jottings

Stanlty W. Blanchard of the E. B. Eddy Company, Hull, Qeubec, was a visitor at the TAPPI office this week.

* * *

Chris C. Crusius of the American Voith Contact Company is now permanently located in New York.

* * *

G. P. Berkey, vice president of Crown-Zellerbach Paper Company, of Portland, Ore., is visiting New York this week.

* * *

R. A. McInnis, general manager of the Anglo-Canadian Pulp and Paper Company, of Quebec, was a New York visitor last week.

* * *

George B. Berkey, of Portland, Ore., vice president of the Crown-Willamette Paper Company, is on an extended eastern trip.

* * *

John Stadler, manager of the Lake St. John Power and Paper Company, of Montreal, is in New York this week. Mr. and Mrs. Stadler are on their way home from a vacation in Europe.

* * *

K. Inouye, director and sales manager, Yasunosuke Fukukita, purchasing manager and Itsuki Nishi, manager of the Jujo Mill, of the Oji Paper Manufacturing Company, of Tokio, Japan, are visiting in New York.

* * *

Dard Hunter, maker of one-man books, stopped in New York last week en route from his home in Chillicothe, Ohio, to Lime Rock, Connecticut, where he is establishing a mill for the manufacture of hand made papers.

* * *

Roderick Olzendam has returned recently with his family from a year and a half stay in Geneva, where he was attached to the International Labor Office of the League of Nations. Prior to that Mr. Olzendam was with the Spanish River Pulp and Paper Mills of Sault Ste. Marie, Ontario. He is now connected with the Industrial Relations Council, at 165 Broadway, New York City.

* * *

Among the trade visitors in New York during the week were the officials of the Central Paper Trust of the Soviet Union of Russia, who are on a tour of this country to buy pulp and paper making machinery and to observe paper making practice here. The party included J. Goriatchef, vice president, John J. Khramtzoff, chief engineer, and Eugene A. Kayatz, consulting engineer. Among other machinery they have just ordered a 234-inch fourdrinier from the Bagley & Sewall Company of Watertown, N. Y. The party left New York on Wednesday to visit the pulp and paper mills on the Pacific Coast and will later visit the mills in Eastern Canada.

* * *

Johan Martin Sundell of Norrköping, Sweden, arrived Tuesday on the Gripsholm. He is to be an industrial fellow appointed by the American-Scandinavian Foundation and is to study American methods of paper making at the Chemical Paper Manufacturing Company in Holyoke under E. C. Tucker, president of TAPPI. Mr. Sundell has had considerable experience in hydro-electric development, being employed by the Vikbolandets Elektriska Kraftaktisbolag and for the past few years has been a member of the engineering staff of Holmens Bruks A/B, corporate members of TAPPI and manufacturers of sulphite pulp and news print. In addition to the fellowship Mr. Sundell also has a travelling scholarship awarded him by the Swedish Board of Trade.

West Coast Paper Products Formed

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 1, 1928.—West Coast Paper Products Company filed articles of incorporation in Oregon October 24, listing capital at $25,000, to engage in manufacturing and selling paper card board and similar products.

Joint Meeting of Miami Valley Associations

A joint meeting of the manufacturers, Technical and Superintendents Association will be held at the Manchester Hotel, Middletown, Ohio on November 22, beginning at 2:30 p.m. with C. M. Baker, engineer of The American Paper and Pulp Association leading in the discussion of Waste Utilization and Stream Purification.

The afternoon session will be in the form of a round table discussion of topics bearing upon these subjects, at which time the superintendents and technical men of the mills through the state of Ohio will discuss the subject with Mr. Baker and others.

The evening program will begin with a dinner to be served in the Main Dining Room of the Manchester Hotel at 6:15 p.m. and will be followed by a program interesting to each and every Mill Executive, Technical and Superintendent.

The tentative outline of subjects is as follows:

Waste Utilization and Stream Improvement, C. M. Baker, Engineer.

The State's Program in Stream Improvement, Dr. Monger or Mr. Waring of the Ohio State Board of Health.

The Use of Chlorine in Utilization of Waste in Paper Mills. An Engineer from the Chlorine Institute, New York City.

Four-Five minute talks by prominent men in the Industry.

The meeting will be sponsored by The Miami Valley Division of the American Pulp and Paper Mill Superintendents Association and be presided over by W. W. Galloway Chairman of the Division.

Robert L. Eminger, national secretary-treasurer of the Superintendents Association is formulating the plans and program for this meeting and much encouragement has been given that this will be a very interesting and valuable meeting.

The members of the Miami Valley Manufacturers Association are expecting to attend this meeting one hundred per cent strong and every effort will be made to care for a large number of guests.

Complete information regarding this meeting will be sent out from the national office of the Superintendents Association at Miamisburg, Ohio and will be published next week.

National Forest Week Discontinued

American Forest Week, observed nationally for the past eight years in the educational interest of the forests of the nation, was voted discontinued as a national event at a meeting of the executive committee of the American Forest Week Committee, of which Theodore Roosevelt is chairman. The reason given was to allow the states and regions where activities afforded by the observance would best meet the educational demands, to hold the observance at such times and in such a manner as would prove most effective locally, the committee believing that nation-wide observance had ceased to be a national necessity.

This action was taken after a very careful and thorough study of the extent of which continued observance of the week would meet the educational needs of the different states. The question of continuing the week had previously been submitted to every state and every organization represented in the American Forest Week Committee, and the reports from the different states and organizations showed that in many sections of the country a strong feeling exists that the week has served its purpose.

Bowers Envelope Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 1, 1928.—Articles of incorporation have been filed with the secretary of state of Indiana by the Bowers Envelope and Lithograph Company, which will have its principal offices at 618 Traction Terminal Building, Indianapolis. The corporation has a capital stock of 1,500 shares of no par value common and $100,000 preferred. It is formed to engage in the manufacture and assembly of envelopes and mailers and to do all sorts of job printing and lithographing work. The incorporators are Clyde A. Bowers, W. Myron Yorker and L. G. Wantz.

Obituary

William F. Donaldson

HARRISBURG, Pa., November 5, 1928.—William F. Donaldson, aged 78 years, formerly president of the Donaldson Paper Company, died October 30 after a lingering illness.

Wm. M. Donaldson with R. A. Johnston formed a partnership the first of January, 1882, under the trade name of Johnston & Co., Harrisburg. They were associated until November 16, 1906, when they dissolved the partnership. At that time Mr. Donaldson organized the present Donaldson Paper Company. On January 1, 1919, Mr. Donaldson retired from the business in favor of his son, J. Allan Donaldson, the present owner.

Mr. Donaldson was a prominent Mason and was active in the business life of Harrisburg. He was one of the organizers of the Merchants' National Bank. In 1924 the Merchants' National Bank was absorbed by the Central Trust Company. Mr. Donaldson became a charter director and president of the latter organization, positions which he held until his resignation in 1925.

Mr. Donaldson was a past master of Robert Burns Lodge, No. 464, F. and A. M.; Harrisburg Council, No. 7, Royal and Select Masons; past high priest of Perseverance Chapter, No. 21, Royal Arch Masons; Pilgrim Commandery, No. 11, Knights Templar; Harrisburg Consistory, Scottish Rite Masons, of which he was a trustee for years.

In Scottish and York Rite Masonry, Mr. Donaldson was exceptionally active. He was a sovereign grand inspector general, making him one of the four active members of the Supreme Council of the Scottish Rite for the Northern Masonic Jurisdiction, entitling him to a part in the business sessions of the thirty-third degree body of the Scottish Rite.

He was past commander of Pilgrim Commandery, Knights Templar; a past grand commander of the Knights Templar in Pennsylvania, and at the time of his death was treasurer of the Grand Commandery of the Knights Templar in the State, having held that office for years, and was treasurer of the national organization of the order.

Mr. Donaldson also was a member since 1914 of the general committee on Masonic Homes of the Right Worshipful Grand Lodge of Free and Accepted Masons in Pennsylvania, and took a keen interest in the development of the Masonic Homes at Elizabethtown.

For years he was president of the Paxtang Electric Company before it was absorbed by the Harrisburg Light and Power Company, which is now the Pennsylvania Power and Light Company.

Mr. Donaldson was always active in city affairs until recent years when his health interferred and no one ever took a more active part in those matters which made for the improvement of Harrisburg. As a member of City Council and interested in the transactions of the main business body—the Board of Trade, and later the Chamber of Commerce—he kept in constant touch with the local development.

It is known to only a few people that when a young man Mr. Donaldson had an adventurous experience in the pioneer West, where he duplicated many thrilling experiences of the old cowboy days. As a salesman for one of the prominent paper companies of the State, he was widely known throughout Pennsylvania before he entered into business for himself in this city. Lewistown was his old home and there he will be remembered by the older citizens.

August Laubscher

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., November 5, 1928.—August Laubscher, 62, well known in the printing and envelope manufacturing business, died recently at his home, 77 Fort Pleasant avenue, this city. He was born in Rockville, Conn., and after leaving school entered the employ of the White-Corbin Division of the United States Envelope Company, with which company he was connected for 40 years, becoming manager of the printing department of the Morgan Division of this city, later in the P. P. Kellogg Division, where he eventually became superintendent, and then manager of the Division. In 1920 he resigned his position to organize the Laubscher Envelope Company, now the Old Colony Envelope Company; but he suffered from a nervous breakdown about this time and never fully recovered his health. Besides his wife he leaves three sisters, Mrs. L. M. Carroll, and Mrs. Emma M. Wemett, of Hartford, Conn., and Mrs. Frank W. Austin, of West Springfield, and one brother, Martin, of Rockville.

George Henry Millen

[FROM OUR REGULAR CORRESPONDENT]

OTTAWA, Ont., November 5, 1928.—Canada's Grand Old Man of the paper industry, George Henry Millen, president of the E. B. Eddy Company, died at his home in Ottawa on November 3 at the age of 90 years. He was one of the leading industrialists of Ottawa and Hull and head of the district's greatest business. A few months ago Mr. Millen suffered an injury to his hip, and later contracted pneumonia. For a time he rallied and there had been hopes that he would recover.

As president and managing director of the E. B. Eddy Company, the late Mr. Millen played a great part in the life of that organization. Starting as a millwright earning $3 a week, by hard work and initiative he had climbed steadily up the ladder. He was much of the same type as his sturdy old friend, the late John R. Booth, who laid down his sceptre as "lumber and paper king of the Ottawa" when death claimed him at the age of 98 years. Like the late Mr. Booth he came to Canada from the United States with only a few dollars, an alert mentality, a world of energy and much ambition. That was 62 years ago, at the instance of Ezra R. Eddy, founder of the company, who twelve years prior had also set out from Glen Falls, N. Y., to carve out a path to fortune.

Before coming to Ottawa Mr. Millen served in the United States Civil War on the side of the North and was wounded.

Besides being an expert mechanic, and possessed of a keen commercial instinct, he was an inventor of considerable note. Several machines now used in match factories throughout the world were first planned by him. He also perfected intricate parts of other machines in the paper and other industries. At the death of E. B. Eddy, Mr. Millen took over a large part of the management of the company, then under the presidency of W. H. Rowley. He became president of the company 14 years ago and had remained in that position ever since.

Deceased was born at Glen Falls, N. Y., on October 23, 1838, the son of the late Mr. and Mrs. Hiram McMullen Millen. After attending the academy of his home town he started his career in the Glen Falls sawmill. He is survived by two sons, Charles H., superintendent of the Eddy concern, and Walter H., at home. The funeral, which took place on November 5 at Hull, was attended by representatives of the pulp and paper and lumber industries from all over Canada.

Mills Passing Out of the Picture

[FROM OUR REGULAR CORRESPONDENT]

GLEN PARK, N. Y., November 2, 1928.—The two large paper mills last operated by the International Paper Company and for a long period of years the principal source of employment for this community will soon be but a memory. The two mills, both of which were damaged by fire and never repaired, have been in a dilapidated condition for some time and negotiations are now under way to have the old mill buildings razed. The tenement properties of the I. P. Co. at Glen Park which formerly housed employees of the paper mills and which have been on the market for several months are being disposed of rapidly. The former home of the general manager of the mills, the old office building and a number of the tenements have been disposed of.

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PROSPERITY WITH MR. HOOVER

The election of Herbert Hoover to the presidency of the United States was no surprise. It was foreshadowed weeks ago. His success as the standard bearer of the Republican party will meet with the approval of most paper men. They have pretty uniformily in the past favored the protective principle for products manufactured in America. Democratic experiments with the tariff, it will be remembered, did not work out satisfactorily in both the Cleveland and Wilson administrations, especiallly as regards the paper industry. While Governor Smith promised no radical changes in the tariff and apparently meant it, paper men who quite generally believe in adequate protection for the industry will feel more secure in knowing that there will be no need to speculate about just what is likely to be done regarding this important matter.

Perhaps not in the lifetime of anyone today has a man better qualified than Mr. Hoover by training and experience in all the most important essentials been elected to the presidency. The old bugaboo of poor business during the period of a presidential election has been happily disseminated this year. Judging, in fact, from present indications, Mr. Coolidge will turn the government over to his successor during one of the country's decidedly prosperous periods and it may be confidently expected that this prosperity will not only be continued but expanded under Mr. Hoover's administration of the government.

PLANS FOR PAPER WEEK

The fifty-second annual convention of the American Paper and Pulp Association and its affiliated organizations will be held at the Waldorf-Astoria Hotel, in New York City, next February 18 to 21, inclusive. The association's staff is already working on the many details of this annual get-together of paper men from all over the United States.

Commissioner W. E. Humphrey, Chairman of the Federal Trade Commission, has accepted President Everest's invitation to address the afternoon session of the association's annual business meeting, and will speak on the commission's trade practice conferences as a means of helping business to eliminate unprofitable and unfair methods of competition.

Another interesting feature of the afternoon session of the association's annual business meeting will be an address by Dr. Chas. H. Herty, on the future of the cellulose industry. This address will be especially interesting to the technical and administrative officials of the industry. Dr. Herty is a fluent speaker and will tell of the marvels and future possibilities in the use of cellulose.

The morning or business session of the American Paper and Pulp Association's annual meeting will be devoted largely to discussion of the report to be presented by the Association's Committee on Development. This committee was authorized at the association's last annual meeting for the purpose of studying the possibilities of further coordination of the cooperative activities of the industry. Under the leadership of Col. B. A. Franklin, of the Strathmore Paper Company, the committee is investigating these fundamental problems of the industry most exhaustively and expects to submit its report to the executive committee of the association well in advance of the annual meeting so that their recommendations may then be taken up by the various branches of the industry and action assured at the annual meeting of the association next February.

The association's annual banquet will be the crowning social event of the week, with a speaker of national importance whose address cannot help but be of intense interest to all those attending this function. "Senator" Edward Ford, whose reputation as a humorist has been thoroughly established as the result of his many successful speaking engagements throughout the country, will insure enjoyable post-prandial entertainment of a more humorous vein.

The merchants' association, the National Paper Trade Association, will be in session at the same time, as well as the service organizations of the industry—the Technical, Cost and Salesmen's Associations. Many, if not all, of the American Paper and Pulp Association's affiliated associations will hold meetings at the Waldorf during this week. It is suggested that paper companies make early hotel reservations as the facilities will be taxed during convention week.

RESEARCH IN WASTE DISPOSAL

In a paper presented before the recent convention of the American Public Health Association held in Chicago, Mr. C. M. Baker, engineer of the American Paper and Pulp Association, recommends the organization of industry for research in waste disposal through local state committees and the national trade associations representative of the various branches of industry affected by stream pollution.

Mr. Baker points out the present tendency to extend public health activities in the control of stream pollution to include the effect upon fish and other aquatic life. Although vitally affected by this movement, he states that industry has not participated in the past in the presentation and discussion of the problem in public health meetings. The necessity of revising "Standard Methods of Water Analysis" to apply to industrial wastes is emphasized.

The problem of industrial waste disposal is divided into two steps, first, utilization of the waste primarily a problem for in-

dustry itself which should be given first consideration, and, second, treatment of the residual wastes, more specifically a problem of state officials in cooperation with industry.

"With reference to the organization of industry," Mr. Baker asserts, "there should be local committees representative of the different branches of industry in each state to cooperate with the state department of health. Such cooperative programs have already been inaugurated in at least seven states, Minnesota, Wisconsin, Michigan, Ohio, Pennsylvania, Maryland, and Connecticut. In these states local committees have been formed, in most cases at the request of the state officials in conference with representatives of the various branches of industry. Practically every state, however, has either an aggressive Chamber of Commerce or Association of Industries. The American Paper and Pulp Association recently assisted in developing an organization through the Associated Industries of Connecticut in cooperation with state officials. The organization in Connecticut provided that the Associated Industries appoint committees representative of their respective branches of industry interested in the problem of stream pollution; the chairmen of these committees then constitute a central committee representative of industry in the state as a whole. Some nine or ten industries of Connecticut have been thus organized. It seems consistent that this policy be followed in other states where industry has not already been organized.

"The organization of industry, however, needs to go further than state committees to provide adequate means for interchange of ideas and data. The pulp and paper industry, realizing the national scope of the problem, is organizing its activities in waste utilization and stream improvement and coordinating the work of the local state committees through its national organization, the American Paper and Pulp Association. It is believed that the pulp and paper industry is the first and only one to place a full-time representative in charge of these activities. The National Canners' Association, however, have given some consideration to the problem and have cooperated in research conducted in various states regarding disposal of canning plant wastes. The work of other industries could doubtless likewise be coordinated through their national organization. The National representatives of the various industries could then constitute a central national committee which could act as a clearing house to assemble and disseminate data of general information. This national organization of industry could then coordinate its activities through the Conference of State Sanitary Engineers and the Public Health Engineering Section of the American Public Health Association. In fact it seems essential that such or similar channels of communication and types of organizations be developed if the most economical and practical methods of handling this problem are to be brought about."

Changes in Union Twine & Paper Co.

DETROIT, Mich., November 5, 1928.—Following the death of Charles R. Heeter, the executive personnel of the Union Paper and Twine Company of Detroit has been reorganized as follows:

W. H. Chatfield, president; Charles N. Bicknell, vice-president; Theodore Hanna, secretary; A. J. House, treasurer and assistant manager; W. C. McLaughlin, general manager; Ferdinand Stetekluh, assistant treasurer and manager of credit department; Malcolm MacGregor, sales manager.

Another Good Record

YORK, Pa., November 5, 1928.

Editor Paper Trade Journal

We read with a great deal of interest the article in a recent Paper Trade Journal dater September 14, by Norman S. Stone of the Mosinee Paper Mills Company regarding an unusual record by one of their employees. We fully concur that this is a record to be proud of, but we find that one of our employees has a record which we believe compares very favorably with that of Mr. Ward's, if not better.

Joseph B. Stoney, who will be 83 years old this coming January is our night watchman and has been with this company for the past 20 years. He recalls distinctly starting to work when he was eight years old as a slate picker in a coal colliery near Scranton, and from his 12th year has had continuous employment in paper mills with the exception of 9 months, when he was in the Civil War. With this exception of 9 months, he has been continuously employed in paper mills for the past 71 years and has lost very little time account of sickness. He had been a beaterman prior to his present occupation of night watchman. His first employment in a paper mill was in a mill at Stanley, N. J., at the age of 12 years, and his occupation at that mill was carrying drinking water to the men in the mill from a well, which was situated about two city blocks from the mill.

At the present time, he is enjoying good health and hopes to add some more years to this record before he retires. He never had the advantage of a school education, and consequently, was put to work very young, however, he is able to read and write very intelligently and has also the fundamentals of a grammar school education, which he mastered himself.

Yours truly,

SCHMIDT & AULT PAPER CO.

H. R. SERF, Assistant Treasurer.

A. P. & P. A. Membership Increasing

The following companies have recently been elected to membership in the American Paper and Pulp Association:

Celotex Company, 645 N. Michigan avenue, Chicago.

Eaton Paper Company, Adams, Mass.

Keyes Fibre Company, Waterville, Maine.

Reading Paper Mills, Reading, Pa.

Rogers Paper Manufacturing Company, Inc., South Manchester, Conn.

Rexford Paper Company, Milwaukee, Wis.

The following are new members of Supply and Equipment Section of the American Paper and Pulp Association:

Fibre Making Process, Inc., 360 N. Michigan Boulevard, Chicago.

Johns-Manville Corp., 292 Madison avenue, New York City.

Kelley Island Lime and Transport Company, Cleveland, Ohio.

Minton Vacuum Dryer Corporation, Greenwich, Conn.

Moore & White Company, 15th and Lehigh avenue, Philadelphia, Pa.

The Permutit Company, 440 4th avenue, New York City.

Solvay Sales Corporation, 40 Rector street, New York City.

Appointed Hammermill Paper Agents

[FROM OUR REGULAR CORRESPONDENT]

EL PASO, Tex., November 5, 1928.—The Hammermill Paper Company announces the appointment of Southwestern Mills Distributors, El Paso, as a Hammermill agent, replacing E. C. Palmer & Co., Ltd., which branch was recently discontinued.

A. R. Holton's Address Requested

If A. R. Holton, who, it is supposed, is working in one of the paper mills in Connecticut, will communicate with the office of the PAPER TRADE JOURNAL, he will learn something of personal interest to him.

A Vulcalock Couch Roll, 24⅜" diameter, 147" long, 1¾" thickness of rubber Density 300 (¼" ball).

WEIGHT *Has Been Reduced in this* Goodrich "VULCALOCK" COUCH ROLL

IT is built on an aluminum core, assuring uniform density and reduction of weight to one-third that of the ordinary roll with iron pipe core.

The rubber is attached directly to the aluminum base by the new Goodrich "Vulcalock" process, which actually "locks" the soft rubber to the metal surface without requiring an intermediate layer of hard rubber.

This new roll is especially adapted to cylinder machines making tissue, or to installations requiring a light-weight couch roll. Write for descriptive bulletin No. 9740.

Other Goodrich Products for the Paper Industry:

Press Rolls—Worm Rolls—Transmission, Conveyor and Elevator Belting—Fire, Water, Air and Steam Hose—Gaskets—Packing—Cutless Rubber Bearings—Aprons—Rubber-Lined Tanks—Screen Diaphragms, etc.

THE B. F. GOODRICH RUBBER COMPANY
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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Wood Room Mill Waste Fuel

By E. V. Ahara [1]

Due to the numerous methods of treatment to which a log must be subjected before becoming pulp, the so-called waste wood products in the pulp and paper mill assume a variety of forms. There is the bark from wet and dry drums, the end cuts, slabs, etc., the sawdust from slashers, the chipper screenings, the shavings from knife barkers, the waste from splitters, and the rejections from screens and knotters. In different mills having various locations and raw materials, these waste products appear in a variety of quantities, proportions and moisture contents, and require different treatments if used for fuel. The wood refuse disposal problem thus becomes an individual one to be studied with particular reference to a set of local conditions.

Heterogeneous Wood Waste

If an attempt is to be made to treat the subject in a general way, it is necessary to forget that the refuse from one source in the mill is not at all the same as that from another source in respect to form. It is obvious, for instance, that shavings offer a much greater surface for combustion than bark per unit of weight, and that end cuts should not burn as readily as saw-dust of the same moisture content. It is possible, of course, to produce a refuse slightly more uniform in size by hogging, but in many cases this process is rendered uneconomical by the excessive amounts of power required.

[1] Combustion Engineering Corp., New York, N. Y.

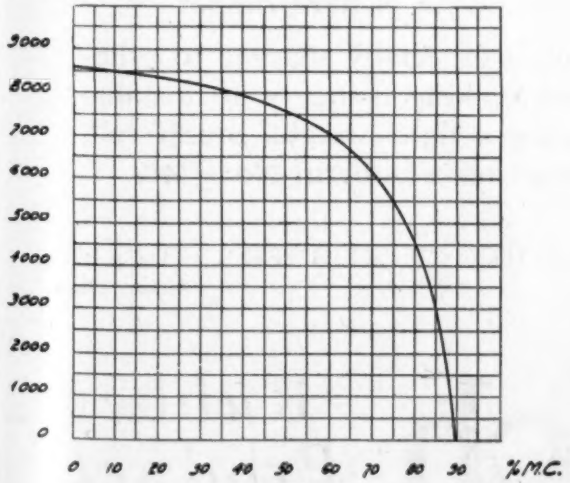

FIG. 1

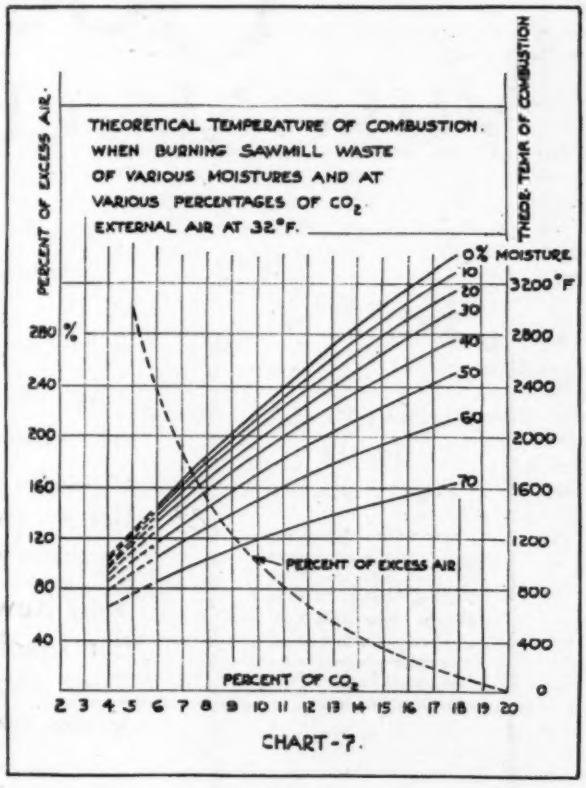

FIG. 2

If variation in form be neglected, it may be considered that all of the waste wood in the mill has approximately the same fundamental heating value and vary only in respect to moisture content. This assumption simplifies calculations, making it necessary to know only the quantity of waste available from each source, and the moisture content of the refuse in each case.

As regards moisture content, such waste as the rejections from

FIG. 3

screens and knotters may be over 90 per cent wet. Bark from the wet drums may have a moisture content of over 80 per cent, and such materials as saw-dust from slashers, chipper screenings, shavings, waste from splitters, etc., in fact all waste from wood processed dry may have a moisture content of from 35 to 55 per cent.

The quantity of refuse available is not determined as readily as the moisture content and has been a stumbling block to the accuracy of many calculations. If the mill equipment capacity is known, and all quantities except that of the bark can be closely estimated; but due to the varying age of wood, loss of bark during periods of water storage and transportation, irregular supply of wood to the pile, irregular barking schedule, and variations in the size of stick, the actual weight of bark per unit of output is difficult to estimate.

Heating Value of Wood

If the average heating value of the refuse per pound of dry substance is taken at 8,600 B.t.u., the available heating value at different moisture contents can be determined from the curve shown in Fig. 1. This curve has been plotted by assuming the available heating value at each point to mean the calorific value of one pound of bone dry substance less the heat required to evaporate the free moisture from and at 70 degrees F. It can be seen from Fig. 1 that the heating value of the fuel is maintained at a satisfactory level up to about 60 per cent moisture content. After that point it falls off rapidly.

Fig. 2 has been reprinted from an article appearing in the January, 1925, issue of the Pulp and Paper Magazine, and gives a very good indication of the maximum moisture content at which wood will support its own combustion. If the moisture content is 60 per cent and the CO_2 is 9 per cent, a theoretical combustion temperature of approximately 1400 degrees F. can be obtained. This would be reduced somewhat in practice, due to the impossibility of obtaining complete combustion, and there would be a strong

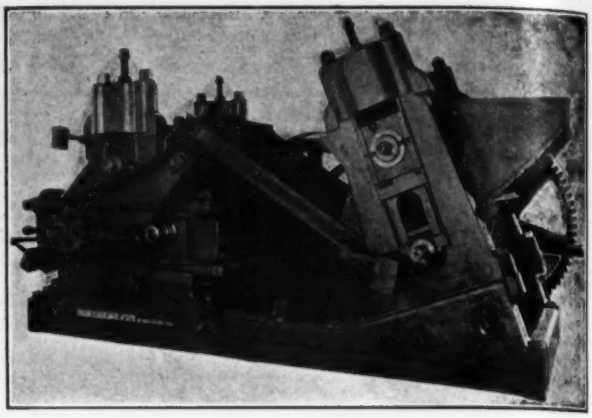

FIG. 4

tendency for the actual combustion temperature to fall below the ignition point of the constituents of the fuel. Deductions from Fig. 2 bear out practical observations to the effect that at 60 per cent moisture content and higher most wood refuse products will hardly support their own combustion.

Methods of Burning Wood Waste

Since it is impossible for what we might call wet refuse to be burned by itself, and since both wet and dry refuse is supplied from the various mill processes, a number of different methods are found for its disposal. These are broadly tabulated in Table 1.

TABLE 1

Method of disposal	A	B	C	D	E	F	G	H
Burned with coal	x		x		x		x	
Burned without coal		x		x		x		x
Pressed before burning			x	x	x	x		
Dried before burning					x	x	x	x
Not treated before burning	x	x						

When the moisture content of the refuse is 80 per cent or more, as usually is the case when it is delivered from wet drums, pressing is almost a necessity if the bark is to be used as fuel. A bark press to reduce the moisture content from 80 to 65 per cent removes more than one-half of the water in the fuel, or more than two pounds of water per pound of dry substance. Pressing usually proves to be an economical operation. Figs. 3 and 4 show typical bark presses.

When the moisture content is between 55 and 70 per cent or

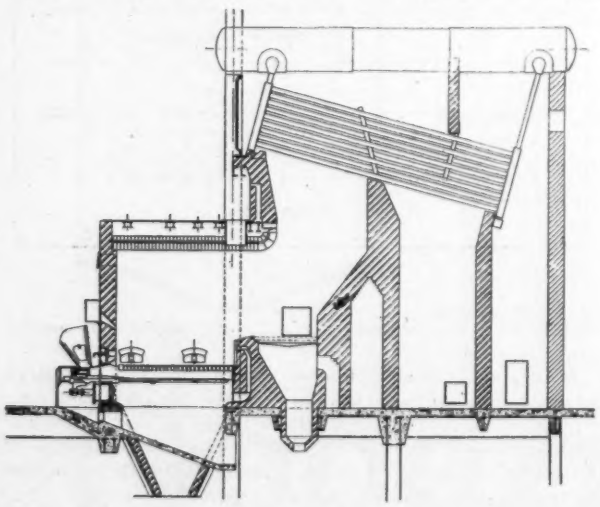

FIG. 5

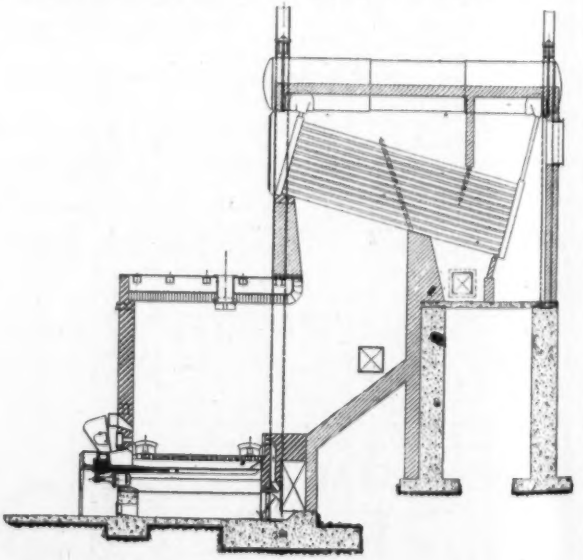

FIG. 6

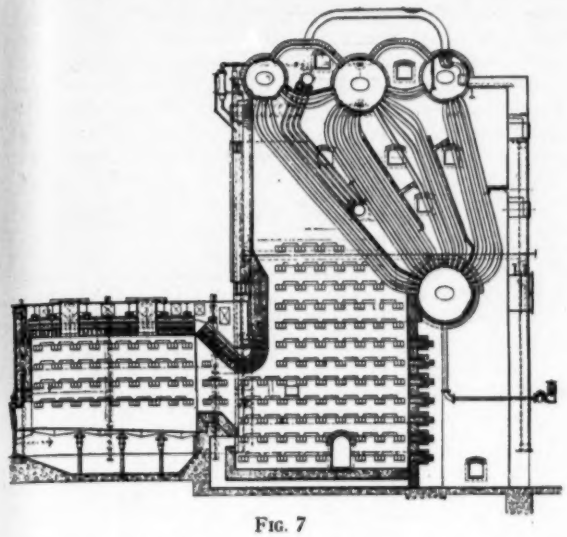

FIG. 7

higher, it is customary to burn the wood refuse with coal in order to maintain the necessary combustion temperature in the furnace. An underfeed stoker in a Dutch oven is the usual arrangement, and provides an exceptionally flexible unit not only for wet refuse but for dried refuse as well. Figs. 5 and 6 are typical setting diagrams for Type E stokers in wood refuse burning furnaces. Fig. 5, with auxiliary grates at the rear and the thimble set well back in the furnace is particularly adaptable to bark having 60 per cent moisture content or higher, and Fig. 6 is a more conservative design adaptable to the use of dry as well as wet wood.

Underfeed Stoker Factors

The underfeed stoker in settings as above described has found a wide and successful application in mills where the wood refuse problem is a difficult one, and the reason for its success can be stated most concisely in itemized form as follows:

(a) An underfeed stoker can dispose of bark having very high moisture content. A coal fuel bed can be maintained in front of the bark pile, and combustion along the surface of the pile is

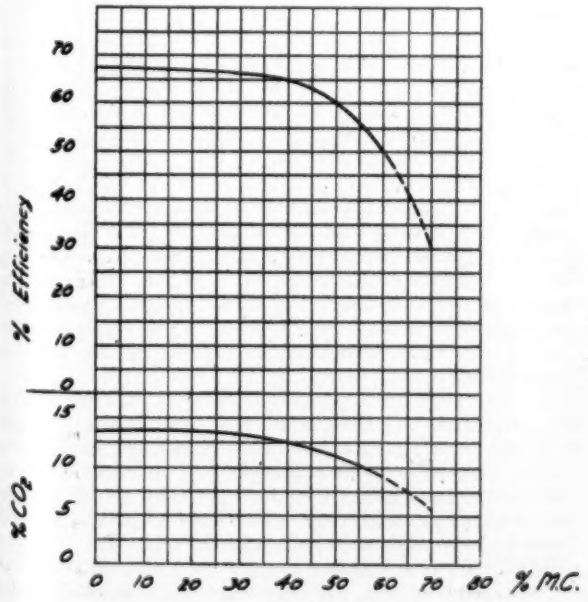

FIG. 9

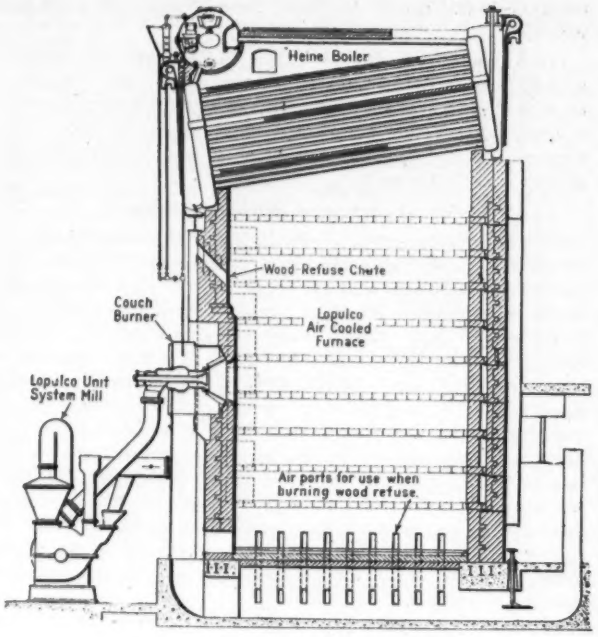

FIG. 8

greatly stimulated both by the hot gases from the coal fire and by the reflected heat from the arch.

(b) Air can be admitted through the coal bed, through the dump grates at the side of the stoker, through the bridgewall if desired, and also through special air inlet nozzles located at the front of the furnace. The supply of air to each point can be regulated separately and due to this control uniformly good CO_2 can be maintained.

(c) An underfeed stoker agitates the bark pile to some extent and so assists in the distillation of the volatile which forms such a large percentage of the wood.

(d) Bark or refuse containing 55 per cent moisture or lower can be burned on an underfeed stoker without coal. If the furnace is wide two thimbles can be used instead of one, and the bark can be better distributed to the corners and sides of the stoker. Either forced or natural draft may be used as desired.

(e) In the season when wood refuse is not available, a good underfeed stoker can be used economically as a coal field unit When the mill has a small boiler house, the bark unit could be almost as efficient as the standard coal fired boilers, and when the mill has large stokers or pulverized fuel units, the small boiler is

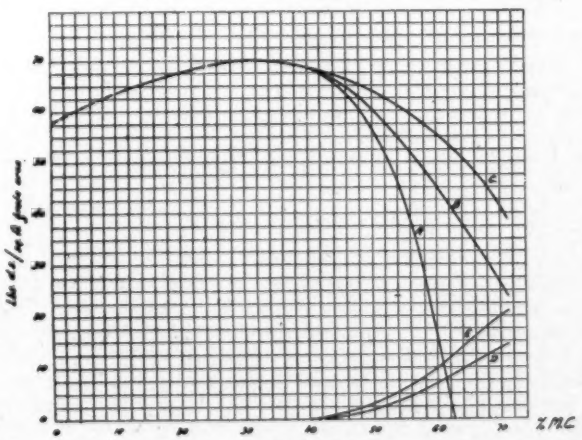

FIG. 10

often decidedly useful for light Sunday loads or emergency conditions.

(f) An underfeed stoker, if of the single retort class, requires very little space for the ash pit, and can be set close to the floor or at the lowest available level. This is of considerable advantage as wood refuse boilers are often revamp jobs and as wood refuse requires a larger combustion space than coal for an equivalent amount of heat liberated.

Wood of Lower Moisture Content

Although the underfeed stoker is used almost exclusively for refuse having very high moisture contents and although it also can be used effectively with dry refuse, it is by no means the only successful method of burning wood having a moisture content of 55 per cent or less. Refuse having a moisture content range of 35 to 55 per cent may be classed as partly dry wood, and can be burned effectively on ordinary sloping grates in Dutch ovens and either with or without preheated air. A typical furnace with the drooping arch construction for this type of refuse is shown in Fig. 7, the drooping arch being a very important part of the design as it assists combustion by reflecting heat to the fuel bed, protecting the wood from a direct view of the tubes, and preventing stratification of the gases distilled in the Dutch oven. In a design of this type combustion is never completed nor nearly completed in the Dutch oven, and a large secondary combustion chamber is essential.

When the refuse to be burned is below 35 per cent in moisture content it is classed as dry wood, and can be burned almost in any way desired. Fig. 8 shows a successful setting for burning dry wood on the floor of an air cooled pulverized fuel furnace. The wood can be burned either alone or in combination with coal if desired.

Shredded Bark

Some thought has been given of late to the possibility of shredding bark, and burning it in finely divided form in a pulverized fuel fired furnace either of the general construction shown in Fig. 8, or equipped with the usual arrangement of water screens and water walls. Tests along these lines indicate that such an installation should be successful and economical providing the bark be well dried before shredding. Wet bark and particularly the tough stringy spruce bark found in Canada is very difficult to shred, and the cost of the power required usually mounts out of all proportion to the advantages obtained. Shredded bark can be delivered to the furnace either through a chute above the burner or through the burner itself. If the particles are sufficiently fine, complete combustion can be obtained readily, but if they are coarse, care must be taken to provide sufficient gas travel for burning out the cinders.

In order to show what boiler and furnace efficiencies might be expected in actual operation and when burning refuse without coal, Fig. 9 has been prepared. The efficiency figures are to be applied to the heating values as shown in Fig. 1 in order to obtain the actual amount of heat absorbed by the boiler per pound of dry substance. The equipment considered when preparing Fig. 9 consisted of a standard underfeed stoker in a good setting, but with no economizer nor preheater. The refuse would be burned at combustion rates as shown in Fig. 10, and would develop ratings as indicated by Fig. 11.

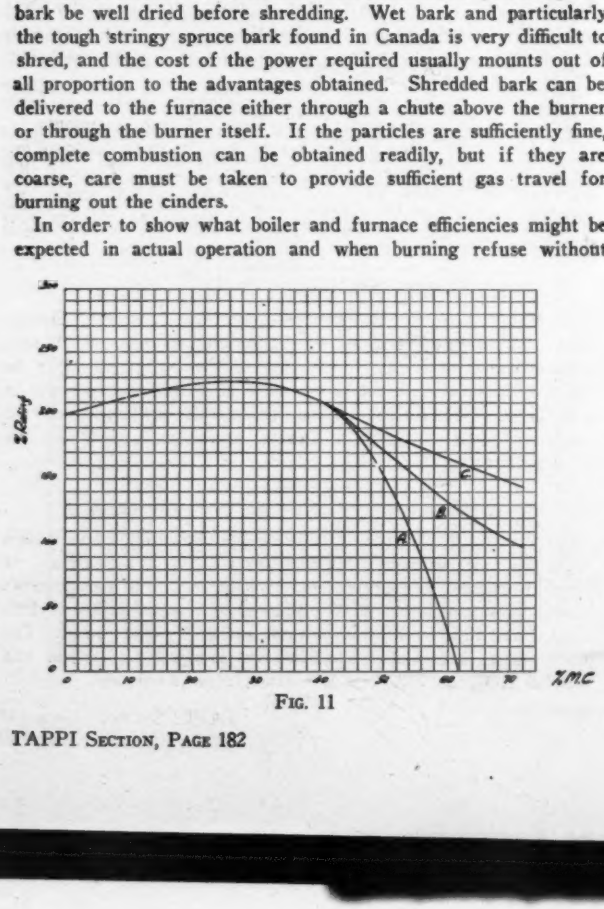

FIG. 11

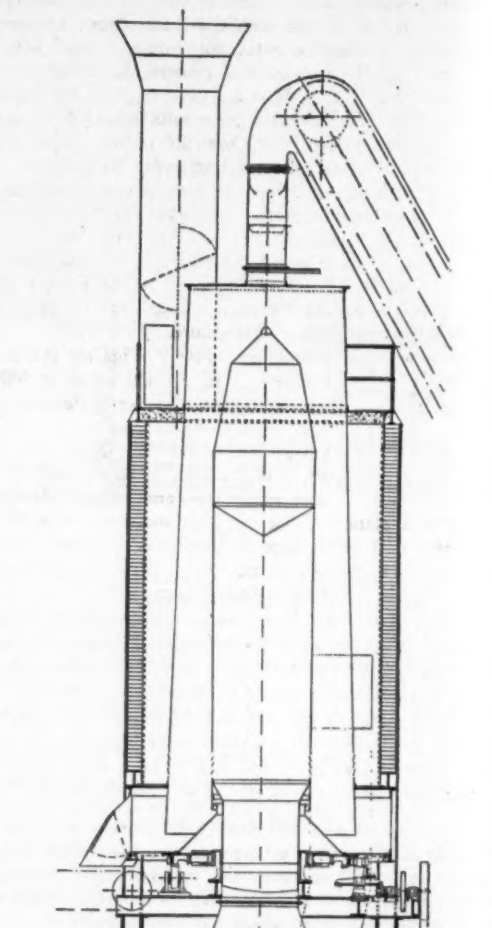

FIG. 12

It will be noted in Fig. 9 that the efficiency rises rapidly as the moisture content is reduced to 40 per cent, but mounts very slowly after that point. The CO_2 values also mount very slowly after a moisture content of 40 per cent is reached. At very low moisture contents the combustion temperatures as shown by Fig. 2 become very high, and it is necessary to keep down the CO_2 somewhat in order to prevent excessive maintenance in the furnace.

Fig. 10 has been prepared to show what combustion rates are to be expected with an underfeed stoker installation of the type shown in Figs. 5 and 6. Curve A represents combustion rates for

refuse burned without coal; Curve B represents normal combustion rates for refuse burned with coal; and Curve C represents forced or peak combustion rates for refuse burned with coal. Curve D indicates the rate of coal consumption in order to get results as shown on Curve B, and Curve E gives the amount of coal consumed in order to obtain the results indicated by Curve C.

Fig. 11 has been prepared to show the ratings to be expected with an underfeed stoker unit operating under the conditions given in Fig. 10. Curve A, as before, is for operation without coal; Curve B is for average operation with coal; and Curve C is for forced operation with coal.

It will be noticed on Figs. 10 and 11 that both rating and combustion rate tend to fall off as the wood becomes drier than 30 per cent. This is due to the same factor that limits the CO_2, namely the rising combustion temperature.

It might be mentioned that the curves in Figs. 10 and 11 were prepared with particular reference to a boiler rated at 500 H.P. and equipped with a stoker having an effective grate area of 100 square feet.

While the use of preheated air has not been considered in any of the curves given above, it is a factor which has a decided influence on combustion rates, efficiencies, and ratings. It is a distinct asset to a plant burning the high moisture fuels, but may cause a great deal of damage to brickwork if used with wood having too low a moisture content.

Waste Heat Driers

An inspection of Figs. 9, 10, and 11 shows very clearly the benefits of reducing the moisture content of refuse to 40 per cent, or even to 30 per cent, which seems to be about its best state. Drying to either of these points can be effected economically only by the use of waste heat driers, and a word in connection with these driers might be of interest.

The largest and most convenient source of waste heat in the pulp and paper mill is of course the flue gases from the boiler house and the waste heat driers are all designed to use flue gas as the drying medium. The quantity of flue gas available, however, is seldom more than sufficient to dry the refuse to the desired points, and it is necessary for the successful drier to have maximum efficiency with respect to the utilization of the heat supplied. A waste heat drier which has shown particular capabilities in this direction is the Nordstrom Drying Tower, a section through which is given in Fig. 12, and which is briefly described below.

Bark or refuse is delivered by a suitable conveyor or elevator to the top of the tower, and fed into a vertical chute through which it is discharged to the top of an annular space between two perforated towers. This annular space is completely filled with refuse which gravitates slowly to the bottom. In order to prevent bridging of the material during its passage through the drier, the perforated towers have a slight taper with respect to each other, the area of the annular space increasing as the refuse moves down. A positive discharge from the tower is obtained by the use of a conical revolving bottom resting upon supporting rollers and kept in alignment by thrust rollers. The revolving bottom is driven by a large gear ring and gear train through which its speed is regulated to less than one revolution per minute. On the revolving bottom are mounted various scrapers, ploughs, and breakers which act somewhat in the capacity of a screw and whose function it is to insure a steady and positive discharge.

The gas is supplied by a fan to the bottom of the drier, through the inlet collar to the inner tower, and thence to the bark layer through which it is forced to the outer tower and the stack. The gas in pasing through the bark is cooled and leaves the tower at low temperature and saturated with moisture. It often happens that the flue gas available from the boilers has a temperature of over 500 degrees F., which is too high for use in the tower, and in order to meet such a condition, a recirculating duct is provided from the drier casing to the fan inlet. Through this duct sufficient cooled flue gas can be passed to reduce the temperature of the inlet gases to the required point. The quantity of gas recirculated is regulated by an automatic damper controlled thermostatically by the temperature of the gas at the drier inlet.

The Nordstrom system can be designed to handle a wide variety of materials and can be built for any range of capacity desired. Due to the definite thickness and resistance of the bark layer exposed to the gas for drying, exceptionally low outlet temperatures can be obtained, and providing sufficient heat is available the refuse can be reduced to any specified moisture content, or even to a bone dry condition if desired.

The limitations of the waste heat drier as an economical part of a wood refuse disposal system are found when attempts are made to apply it directly to refuse having high moisture contents. A reduction from 80 to 65 per cent moisture content, for instance, can be effected economically only by pressing, whereas a reduction from 65 to 40 per cent moisture content can be effected economically only by waste heat drying.

Paper Manufacture

Die Papierherstellung der Feldmühle, Papier- und Zellstoffwerke Aktiengesellschaft (Manufacture of paper at the Feldmuhle Paper and Pulp Co.) by Richard Hamburger and Hans Friederich. Berlin. Organisation Verlagsgesellschaft m. b. H. (S. Hirzel), 1928. 49 p. 2.75 RM.

This little book on paper manufacture is volume 5 of a series under the title "Musterbetriebe deutscher Wirtschaft" (Model works in German industry), the purpose of which is to arouse the people to the fact that German industry and trade are once more in the forefront of the world's economics. The book is printed on "Feldmühle special bank post 1528" and is illustrated by cuts of the works and machinery. To bring out the contrast between modern paper making and the original hand methods of the Far East, reproductions of pictures illustrating the making of paper as described in an ancient manuscript, "Kamisuki Chohoki" (Convenient handbook on papermaking), by Kunihigaski Jibei are interposed between the pictures of the modern plant.

After a short account of the origin of paper, modern papermaking is concisely described, followed by a history of the origin and development of the Feldmühle, which shows its quick but steady progress from a small beginning in 1885. The manufacture of sulphite and mechanical wood pulps is described and illustrated, as well as the manufacture of paper, the size of the plant and machines being specially emphasized. The finishing processes, laboratories, office methods, management, factory accounts and welfare work are briefly described.

This mill contains the largest paper making machine in Germany, being 236 inches wide and running 984 feet per minute.

The first chart in the book indicates that the daily consumption of the mill is 3,000 trees (equivalent to 35 acres of land), 700 tons coal, 96,000 cubic yards of water, 4,400 tons of steam and 36,000 horse power of electricity. The products sold are also shown in a second chart.—C. J. West.

Move Bag Machinery To St. Helens

Portland, Ore., October 25, 1928.—The bag factory at Emeryville, Cal., formerly operated by the Hawley interests of Oregon, is now being dismantled, and some of the equipment is to be shipped to St. Helens, where the new plant for the company is now under construction. A number of the employees of the California plant will move to Oregon and be associated with the St. Helens factory.

Bear Mountain Tissue Mills Incorporated

Albany, N. Y., October 31, 1928.—The Bear Mountain Tissue Mills, Inc., was granted a charter this week by the Secretary of State to operate at Cornwall-on-the-Hudson. The corporation's capital stock consists of 3,500 preferred with a par value of $100 a share and 12,500 shares of common stock of no par value. The incorporators are Arthur H. Florance, Edward L. Conklin and William E. Green, 250 West 57th street, New York City.

Opacity Determination with the Ives Tint Photometer*

By R. H. Doughty [1]

The opacity of a sheet of paper is often one of its most important characteristics when the paper is considered from the standpoint of use requirements. Thus in the case of news or other print papers the greatest possible opacity is desirable, while with all tracing paper and with glassine for certain purposes it is important to reduce the opacity to the lowest value compatible with the production of a paper satisfactory in other respects.

In the course of some studies at the Forest Products Laboratory, it was found necessary to make a considerable number of opacity determinations in order to compare the quality of papers made at the Laboratory with commercial papers of the same general class. A number of tests to show the effect of certain variable factors on the results obtained were also carried out. The purpose of the report now given is to present the results of these experiments.

Methods for Measuring Opacity

There are several recognized methods for measuring opacity. One of them is the Böhm method,[2] which uses the so-called grease-spot photometer. A more familiar way of making such measurements is by the extinction method in some one of its various modifications. In this method an increasing number of sheets of paper are placed over a slit until the light from a standard source placed behind the slit is no longer visible, the number of sheets or the total thickness necessary being recorded.

The methods named have certain disadvantages, which are especially marked with the extinction procedure. The great simplicity of the extinction method, however, makes it very generally useful. Both methods record the behavior of a sheet of paper placed between the light and the observer, which may be somewhat different from its behavior when both light and observer are on the same side of the sheet. An altogether different method for measuring opacity was described by C. F. Sammet[4] in 1912. At about the same time, the Bureau of Standards[4] was working on an instrument making use of the same principle, which finally developed into the present standard instrument of the Bureau.[5] This work by the Bureau of Standards is the basis of the present TAPPI opacity test. In this test a quantity, which is designated as the "contrast ratio," is measured. This is the ratio of the brightness of two sheets, one of which is placed over an absorbing background, while the other is over a reflecting background, consequently it is a direct measure of the opacity of the material, under the conditions in which the opacity of paper is generally of importance.

Theory of Contrast - Ratio Method

Possibly cellulose itself is transparent. If so, the opacity of paper is due, to a large extent, to diffuse reflection of light at the multitude of small fiber surfaces in the sheet. When light falls upon a sheet of paper, a part is reflected, a part is transmitted, and a part is absorbed. If the sheet of paper is placed over a perfectly reflecting background, the transmitted light is reflected, part of it emerging at the upper surface, and the rest being lost by further absorption in the second passage. If a perfectly absorbing background is used, the light transmitted in the first passage is entirely lost. When two sheets of a paper that is not entirely opaque are compared under such conditions, the one over the absorbing background will appear darker than the other; the darker this sheet appears the less opaque the paper. The ratio of the brightness of these two sheets is the quantity measured in the method under discussion.

The relations that obtain are shown schematically in Fig. 1. In the case illustrated, although for convenience regular reflection is shown, only diffuse reflection is considered, and it is assumed that both the sample and the background A are perfect diffuse reflectors and the background B is a perfectly absorbing surface, conditions that do not obtain in practice. Both sheets are illuminated at m by light of intensity I_0. A part of the light, L_1, is reflected directly at or near the surface. Another part, represented by L_2, is reflected from the interior of the sheet. A third part passes entirely through the sheet, emerging at n. The third part is reflected from the background A, the amount T emerging from the upper surface at o; when this third part falls on background B it is absorbed. Finally, a certain amount of light (indicated by tapering the heavy lines) is lost in the passage from m to n and

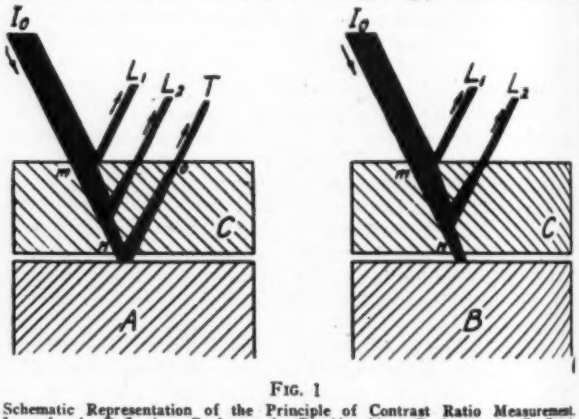

FIG. 1

Schematic Representation of the Principle of Contrast Ratio Measurement. Legend. A—Reflecting Background. B—Absorbing Background. C—Specimen Paper.

from n to o Thus the sum of $L_1 + L_2 + T$ is not equal to I_0.

The intensities of L_1 and L_2 may be grouped together,

$$L_1 + L_2 = L$$

Then $L + T$ is the intensity of the light reflected from the sheet and background A, while L is the intensity of the light reflected from the sheet and background B, under the illumination I_0, and by definition the *contrast ratio* is

$$R = \frac{L}{L+T}$$

With a perfectly transparent material,

$$L = 0 \text{ and therefore}$$
$$R = 0$$

whereas with a perfectly opaque body

$$T = 0 \text{ and consequently}$$
$$R = 1$$

It is also possible to write

$$Q = \frac{T}{L+T} = 1 - R$$

---

* Presented at the Fall Meeting of TAPPI, Wausau, Wis., Sept. 25-27, 1928.

[1] Assistant Engineer in Forest Products, U. S. Forest Products Laboratory.

[2] Wochbl. Papierfabr. 41, 4404 (1910); Papier-Ztg. No. 50 (1908).

[3] U. S. Department of Agriculture Circular 96 (1912). See also Paper Trade Journal 81, 47 T. S. (1925).

[4] Trans. Am. Cer. Soc. 17, 150-5 (1915).

[5] Bureau of Standards Circular 63 (1917).

The quantity Q, defined by this equation, will be designated in this paper as the *translucence ratio.*

Printing may have a tendency to "showing through" or to "strike through" paper. "Show through" may be said to depend simply upon the opacity. "Striking through" is due to the penetration of the ink into the paper, and is also partly dependent upon opacity for, other things being equal, a penetration of ink part way through the sheet would be less serious in a more opaque paper. With other papers the opacity or lack of opacity may also be an important property from the user's point of view.

By measuring the contrast ratio, with proper precautions, the opacity of any paper may be determined on a fixed, accurate, and reproducible scale. The measurement may be made with any instrument that is capable of measuring or of comparing the apparent brightness of two samples under the conditions of the test. Sammet[5] originally used the Ives tint photometer. He later[6] devised an apparatus for the purpose, which he considered somewhat simpler. The Bureau of Standards[7] uses a more accurate photometer than the Ives, and also an improved arrangement for illuminating the sample. Thus results are obtained that probably are somewhat more accurate than those that can be obtained with the Ives machine.

The Contrast-Ratio Method With the Ives Photometer

In the work here reported, the Ives machine[7] regularly used at the Laboratory for color measurements was employed. It is an Ives tint photometer of the earlier type, which has been somewhat altered in certain mechanical details to give improved accuracy and reproducibility of measurements. Since the original purpose of this work, as already stated, was to obtain relative values on a number of papers, a high degree of accuracy in absolute values was of secondary importance. For this purpose, the instrument is entirely satisfactory.

In making opacity measurements, the reflecting background (Fig. 1) takes the place of the magnesia standards used in color analysis work and the absorbing background takes that usually occupied by the sample under examination. Then when the paper samples are placed over the backgrounds and the photometer is adjusted as in making color readings, the scale reading on the photometer divided by 100 gives the contrast ratio R. Thus the manipulative and the mathematical work of securing the contrast ratios is rendered very simple by the construction of the instrument.

For the reflecting background, a magnesium carbonate block such as that employed as a standard in color photometry, was used. For the black background, a piece of wood of the same size as the magnesium carbonate block, painted with several coats of dead black Japalac stain, was selected. The surface so obtained was not a perfectly absorbing black; it reflected between 4 and 5 per cent of the incident light, as measured against the magnesia block. In use, such a condition means that the black background, instead of being perfectly absorbing, reflects 4 or 5 per cent of the light that passes through the sample. At values of R above 0.80, the error caused in this way is within the limits of experimental error. Other backgrounds were tested—for instance, heavily smoked glass—but the painted block gave results as satisfactory as any, and was much easier to manipulate.

The sheets to be measured, which were laid directly upon the surfaces of the backgrounds, were held in place by heavy U-shaped brass weights. These weights, which were uniform in size and shape, were painted black, so that they would not seriously affect the readings. It is important that the sheets be held smooth and level, and also that whatever arrangement is adopted for placing and holding them in position be maintained as a standard. Uniformity of procedure seems more important than the exact procedure used. The use of expanding clamps of a type such as that developed for making color readings with the photometer would be a desirable improvement.

[5] Ind. Eng. Chem. 9, 784-5 (1917).

[6] See Baird, P. K. Paper Trade Journal 84, No. 17, 48-54 (1927) for details of the construction, operation, and theory of this apparatus.

TABLE 1
CONTRAST RATIOS OF NEWS PRINT PAPER

Source of samples	Thickness in inch x 10^{-4}			Contrast ratio		
	Maximum	Minimum	Average	Maximum	Minimum	Average
26 Canadian mills	41	30	33.2	0.95	0.88	0.91
14 American mills	39	30	33.8	0.94	0.89	0.91
Average			33.4			0.91
6 Laboratory papers...	34	29	32.3	0.95	0.89	0.92
16 Laboratory papers...	55	24	37.9	1.00	0.89	0.95

The samples were illuminated by the standard daylight lamp that is attached to the photometer.

In determining the contrast ratio, the average of three values was taken. It was found that in general a single setting could readily be duplicated to one or two scale divisions, and the average of three settings to within one scale division, which agrees with Sammet's findings. Owing to difficulties in matching, which will be mentioned later, a green color filter was used in making all the readings, except those in Table 3. When a filter other than green was used the fact is recorded in the tables. It will be shown that for most purposes the use of a green filter does not materially affect the results, though the color filter used must be taken into account in testing papers of decided hue.

Thickness of the sheet was determined by direct measurement of the samples, which were assumed to be of uniform thickness. Each set of samples was cut from adjacent parts of a large sheet.

Measurement of the Opacity of Newsprint

Table 1 gives a summary of the contrast-ratio values obtained from news print papers, using the method just described. Forty samples of commercial papers and 22 samples of papers made from special furnishes at the Laboratory are included. The commercial samples are subdivided for convenience into two groups, one from American mills and the other from Canadian mills. The 22 Laboratory samples are also divided into two groups, the first comprising those samples that lay within the thickness limits of commercial news print, and the second comprising the remainder of the samples tested. In general, the higher values were given by the thicker sheets. These tests show that the contrast ratio of commercial news print, as determined by this method, is above 0.88, and that the special Laboratory papers were entirely satisfactory in this quality.

Effect of Various Factors on Ives Values

Within the limits set by the mechanical and the optical limitations of the equipment, values obtained by the contrast-ratio method give an accurate measure of opacity. The method fails with very opaque or very translucent materials if the instrument employed cannot measure accurately to small fractions of 1 per cent. With the Ives machine, the accuracy of setting decreases considerably at contrast ratios above 95 per cent. The conditions of illumination and of the paper surface also have a considerable effect on the results obtained, with any instrument. Several factors, which must be taken into account when evaluating readings made by this method, have been studied, and will now be discussed.

Paper Variables

Effect of Thickness

The variation of transmitted light with thickness of transmitting medium is a regular exponential function when the medium is uniformly transparent. The case for translucent or diffusing media is not so well understood. It is considered at length in a series of reports[8] on the optical properties of diffusing media, by the Illuminating Engineering Society's Committee on Glare. The statements of theory there made seem to be somewhat contradicted by later work.[9] To attempt to apply any of this theory to contrast ratio measurements seems not to be justified at present.

Over small ranges of thickness, such as 0.0005 inch, the con-

[8] Reports 2, 3, 4, 5, and 6 of the Committee on Glare, P. G. Nutting, chairman. Trans. Ill. Eng. Soc. 10, 353-96 (1915). Nos. 3 and 5 give results obtained on papers.

[9] J. W. T. Walsh, Photometry, p. 116; M. Luckiesh, Color and its applications; Van Nostrand; second edition, 1921, pp. 91 and 378 et seq.

trast ratio may be considered to be directly proportional to thickness. This relation is only an approximation, however, as Fig. 2 shows for two papers, and fails markedly if the thickness range is very great. Although there is a definite relation between thickness and contrast ratio, it is not a straight-line function. The same is naturally true of the translucence ratio. It was found, however, that if the logarithm of the translucence ratio Q is plotted against the thickness t, a straight-line relation is obtained, as shown in Fig. 3, which holds over a considerable range of thickness and of translucence-ratio values.

On the basis of the logarithmic relationship, it is possible to carry out a more accurate correction for thickness by determining the translucence number for two different thicknesses, plotting the values on logarithmic paper, as in Fig. 3, and drawing a straight line through them. The translucence ratio for any thickness may then be read off on this graph. Then subtracting the translucence ratio from unity gives the corresponding contrast ratio.

When the lines in Fig. 3 are extrapolated to zero thickness they cut the log-Q axis at about 0.80 rather than at 1.00, as one might expect. The determination of the point of intersection is necessary to a convenient method, now to be described, of finding from a known value of translucence ratio the value for another thickness of the same kind of paper; this method, like the extrapolation, is sufficiently accurate for its purpose. Experimental results justify such extrapolation for the manifold paper, although for the news print samples it is somewhat uncertain. It should also be pointed out that one sample of glassine (see Table 3) gave a value for Q of 0.85 at a thickness of 0.0018 inch. For correction over the range of thickness usually necessary, however, the point 0.80 may be taken as the log Q intercept. It is then possible to correct a single Q value to any desired thickness by drawing a line through the point plotted for that value and the 0.80 point on the log-Q axis. This method, although subject to some error, at least is better than the assumption of direct proportionality between Q and t.

Any of the straight lines of Fig. 3 may be expressed by the equation

$$\log Q = b - at$$

where Q is the translucence ratio, t the thickness of the paper,

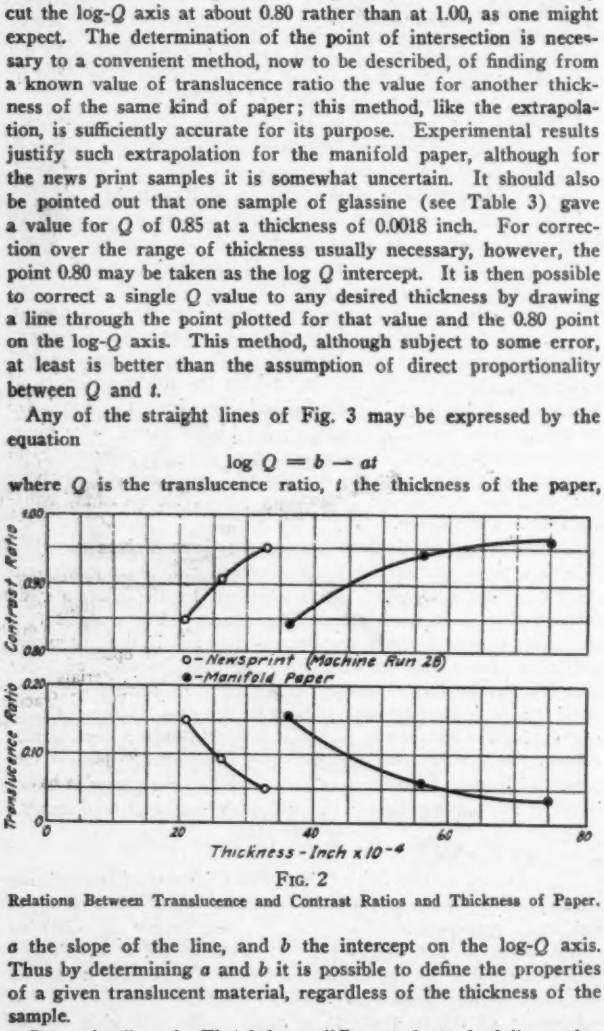

FIG. 2

Relations Between Translucence and Contrast Ratios and Thickness of Paper.

a the slope of the line, and b the intercept on the log-Q axis. Thus by determining a and b it is possible to define the properties of a given translucent material, regardless of the thickness of the sample.

Since the lines in Fig. 3 have different slopes it follows that different furnishes have different characteristic opacities or absorbing powers, that for the manifold paper furnish being less than that for the news print furnish (actually about 40 per cent less) in the present case. This agrees with some recent results published by Holwech.[9]

The relations found between translucence ratio and thickness should prove especially useful in studying the effect of varying the proportion of different kinds of pulp or filler in the paper furnish. Translucence ratios, on account of mathematical relations, lend themselves to such a treatment somewhat more readily than do the contrast-ratio values, which is the reason for using the translucence ratios here.

TABLE 2
EFFECT OF THE SMOOTHNESS OF THE PAPER ON THE TRANSLUCENCE RATIO

Sample	1[2]	3	5	6	2	4	7	8	9
Cockle[1]	N	N	N	N	S	S	E	E	E
Thickness in inch x 10^{-4}	37	30	30	30	31	30	31	31	31
Translucence ratio Q	11	14	14	13	12	13	10	12	10
Q corrected to a thickness of 0.0030	15	14	14	13	13	13	11	13	11

[1] N = none, S = slight, E = extreme.
[2] Sample 1 is not wrinkled, but has a rough finish; it is uncalendered.

Effect of Surface

In making color readings on the Ives machine, the character of the surface of the sample has been found very important. In making opacity measurements, the values obtained may be varied almost at will by slightly wrinkling one sample or the other with the fingers. The effect of this factor is shown in Table 2. All the samples tested for this effect were from the same machine run on the Laboratory paper machine, but they were of varying

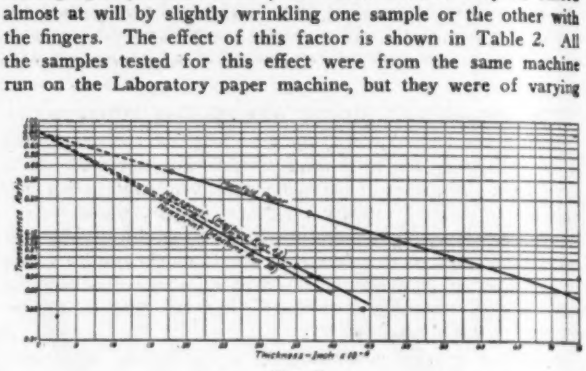

FIG. 3

Relation Between Translucence Ratio and Thickness of Paper.

degrees of cockle, as indicated. The effect of an unfinished surface, without cockling, is shown in sample No. 1.

The values were corrected to uniform thickness by the graphical method just described. Calendering changes the nature of the surface, probably decreasing the diffuse reflection. The values for the extremely wrinkled sheets are definitely in error. This fact shows how important an effect the nature of the paper surface has on the contrast ratio. The character of the surface must always be kept in mind in making studies, such as those suggested, on various furnishes. This source of error is not serious in routine testing, however, if the sample sheets are originally unwrinkled and are carefully handled.

Instrument Variables

Position of Sample Holders

The backgrounds are firmly fixed in position in the instrument. The brass weights, however, may be moved somewhat. Moving either or both of them as far as possible from their normal positions, a displacement much greater than the maximum that ever occurred in operation, was found to cause a variation of less than

[9] Papir-Journalen. 16, 158 (1928); Papier-Fabr. 26, 488 (1928) (abstract).

TABLE 3
EFFECT OF THE COLOR OF THE SAMPLE AND OF THE LIGHT FILTER ON THE CONTRAST RATIO

Sample of paper	Thickness in inch x 10^{-4}	Contrast ratio			
		White	Red	Green	Blue
White mimeograph	45	1.00	1.00	1.00	1.00
Heavy blue-green	34	.98	1.00	.95	.95
Heavy pink	34	.92	.90	.95	.98
Heavy green	30	.93	.96	.89	.91
Heavy yellow	28	.87	.84	.89	.98
Heavy white	35	.81	.75	.76	.82
Thin pink	19	.62	.53	.75	.75
Thin yellow	18	.58	.55	.58	.73
Thin white	15	.52	.53	.55	.58
Thin orange	17	.48	.44	.50	.68
Glassine	18	.15	.14	.15	.16

TABLE 4
COMPARISON OF THE CONTRAST RATIO WITH THE SCHOPPER EXTINCTION VALUE

Sample	8	5	6	2	3	4	1	7
Contrast ratio	1.00	0.97	0.95	0.94	0.92	0.88	0.85	0.58
Schopper number	4	4	6	5	7	9	13	36

one unit in the readings. This variation is less than the usual experimental error with the photometer used.

EFFECT OF COLOR

Color is both an instrument and a paper variable. The measurements recorded in Table 3 show that the samples will be placed in practically the same relative order whether a red, green, or a blue filter or white light is used in making the measurements. The actual values obtained, however, may vary considerably, especially with colored papers. In considering these values, it is necessary to remember the large possible error in using a blue filter or white light (no filter), because of difficulty in matching the field. When a blue filter is used the field is very dark, and it then is always difficult to secure accurate settings. In a white field it also is often difficult, and with some samples is impossible, to secure a satisfactory match, since not only the brightness but also the hue of the two halves of the field appear different. "Duplicate" settings may vary by as much as 5 to 15 units. By using a color filter this difficulty is avoided. Since green is the color of greatest luminosity, this filter alone was used in all the work except that recorded in Table 3, as has already been noted. The results in Table 3 also give an idea of the behavior of colored papers in this test. Sammet has recommended that in measuring colored papers, a filter of the same color as that of the paper be used.

In comparing papers of very different colors the results are liable to error. This situation is due to the fact that a colored paper will absorb more light, and will reflect and transmit less than a white paper. Table 3 clearly shows how much more transparent a paper is to light of its own color than to other colors. Thus the "thin pink" sample transmits more red than green or blue light, while the "thin yellow" sample transmits red and green (the components of yellow) about equally, but stops the blue rather effectively. Such selective transparency also indicates how important is the character of the incident light.

Since the work now under consideration was completed, the article by Holwech[10] already mentioned has come to our attention. He studied in considerable detail the theoretical aspects of the transmission, absorption, and reflection of light by paper finding that, with white papers, absorption depends upon wave length, average values being obtained with green or yellow light, or with a daylight lamp (white light). His results are in agreement with the use of the green filter in the present work. He also points out that paper exhibits selective absorption, whether it is colored or not, and recommends that opacity measurements be made with light from a daylight lamp filtered through a layer of the same paper as that being tested. Light from a daylight lamp and green light of wave length 546 mu, filtered in this way, were found by him to give concordant results.

RELATION OF RESULTS OBTAINED WITH THE IVES INSTRUMENT TO THOSE OBTAINED BY OTHER METHODS

It has been shown by Sammet[8] that the contrast-ratio method places samples in the same relative order as the Böhm method. The results in Table 4 show that it also agrees very well with the Schopper extinction test. The Schopper number given here is the number of sheets of the same thickness required to cut off all transmission of light. No correction is made here for variation in thickness of sheet.

The Schopper test possibly will give finer distinction with very opaque papers, while the contrast-ratio method is simpler and probably is more accurate for more translucent samples.

TABLE 5
COMPARATIVE CONTRAST-RATIO DETERMINATIONS

Nature of paper	Bureau of Standards value	Ives value: Black block	Ives value: Black cavity
Bond	0.823	0.815	0.825
Manifold	.601	.595	.600
Glassine	.084	.105	.085

Quite recently three samples were received, at the Laboratory, the contrast ratios of which had been determined at the Bureau of Standards with the Bureau's instrument. These samples, consisting of a bond, a manifold, and a glassine paper, have also been tested on the Laboratory Ives apparatus. The results appear in Table 5.

The first column of figures gives the contrast ratios determined by the Bureau of Standards with their standard equipment. The second column gives the values found by means of the Ives machine with the black background used throughout the previous work, namely, a blackened wooden block. The values recorded in the third column were also obtained with the Ives machine but using as a background a cavity lined with black velvet. This background was constructed by boring a 2½-inch hole through a block of the proper size, inserting a 2½- by 12-inch copper cylinder in this hole, so that it came flush with the top of the block, and covering the inside walls and the bottom of the cylinder and the top of the block with heavy black velvet.

The values given in Table 5 show that contrast ratios measured with the Laboratory Ives instrument, using a black cavity, agree very closely with those measured with the Bureau of Standards instrument. More extensive confirmation of this agreement, established through work on a considerable number of papers, is desirable. These values indicate in addition that the use of the black painted block (also black matt paper or black velvet) is permissible with contrast ratios above 0.80, which confirm the statement made earlier in this paper; in fact, the agreement seems to extend below 0.80 far enough to provide a sufficient margin of safety. Indeed, when the only object is to obtain a set of values consistent among themselves, such a background can also be used for translucent papers. Tests by different operators made on these papers at intervals during several weeks have demonstrated the reproducibility of the results.

ADJUSTMENT OF INSTRUMENT

The necessity of correct adjustment of the photometer cannot be overemphasized. It is as important in this work as in colorimetric work,[7] if contrast ratios measured on different machines, at different times, or by different operators are to be comparable. If reasonable precautions are taken throughout the work, results checking within 1 per cent may be obtained.

Summary

The contrast-ratio method as described by Sammet has been used for measuring the opacity of papers, by means of the Ives tint photometer. The values for 40 news print samples range from 0.88 to 0.95, with an average of 0.91, as found by this method.

A few of the more important factors that might influence the values obtained by this method have been investigated. The effect of varying thickness was found to follow a mathematical law. The character of the paper surface affects the results. It is advisable to use one color filter (preferably green) for all measurements that are to be compared directly. Exact comparison of the opacity values of differently colored papers is not advisable. The results obtained in this work are in satisfactory accord with those of other methods, including that using the Bureau of Standards instrument, when a suitable black background is employed.

The contrast-ratio method, in the modification here used, for determining opacity is simple, reproducible, and accurate, provided proper care is exercised in making the measurements.

Through the mathematical relationship determined between the logarithm of translucence and the thickness, it is possible, with other factors such as color and finish nearly constant, to study opacity as a property of the material of which a sheet is made rather than of the sheet itself.

Advance Superintendent Transferred

J. A. Fincken, superintendent of the Advance Bag and Paper Company's mill at Howland, Maine, has been transferred to the Southern Advance Bag and Paper Company's plant at Hodge, Louisiana.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Beating

Control of Beater Furnish to Eliminate Foaming on the Paper Machine. George K. Spence. PAPER MILL 51, No. 8, 128,130 (Feb. 25, 1928); Paper Trade J. 86, No. 9, 53-54 (March 1, 1928); PULP PAPER MAG. CAN. 26, 273-274 (March 1, 1928). The chief sources of foam on the paper machines are: (1) alkalinity of the various stocks may be too high when delivered to the beater; (2) sulphite and soda pulp may not be sufficiently washed after bleaching to remove the colloidal stock present; (3) old paper stock may not be washed thoroughly enough after deinking and defibering to completely remove glue or other colloidal materials which may be present; (4) rosin size may not be properly precipitated; (5) use of leaky stock-circulating pump; (6) too much air may be entrained in the stock passing down from the head box. Prevention of foaming from these various causes is discussed.—A.P.-C.

Beating with Rods. S. D. Wells. PULP PAPER MAG. CAN. 26, 301-303 (March 8, 1928); Paper Ind. 9, 2054d-2054e (March 1928). A discussion of the merits of the Marcy rod mill. It is claimed that: (1) it can handle stock at any rate and at any consistency that can be furnished from deckers or thickeners; (2) at 8 per cent consistency it will beat stock with from 50 to 70 per cent less power than is at present used by hollanders; (3) it will develop greater strength from standard pulps than any other equipment known at present; (4) it will yield freer stock capable of producing paper at any specified test, on account of most rapidly developping maximum felting properties; (5) it will develop the parchment effect with less brittleness, destruction of fiber and loss of strength and toughness than any other equipment now used; (6) it will operate seven days in the week for 24 hours per day for years, with less than 2 per cent time lost for repairs.—A.P.-C.

Some Tests on a Jordan Using Kraft Stock. J. S. Little. PAPER MILL 51, No. 8, 96-100 (Feb. 25, 1928); Paper Trade J. 86, No. 9, 56-57 (March 1, 1928). Tests carried out with a Noble & Wood baby jordan operated at a capacity of 1 pound of stock per minute showed that, when the amount of the stock treated per minute is kept constant, variations in consistency from 2.62 to 1.41 per cent did not have any appreciable effect on the slowness, shrinkage, bursting strength, tensile strength or tearing resistence. Tests carried out keeping the consistency of the stock and the rate of treatment constant but varying the adjustment of the jordan indicated that the jordan treatment is essentially one of "damage," i.e., cutting and splitting of the fibers. Comparative power consumption figures indicated that the jordan used only about 35 per cent of the energy that the beater did in bringing the pulp to the same slowness (23 seconds); but the efficiency comparison between the beater and jordan depends to a considerable extent on the beating schedule.—A.P.-C.

Paper Pulp for the Manufacture of Greaseproof Paper. H. A. Smith assignor to the Hamersley Manufacturing Co. U. S. pat. 1,644,451 (Oct. 4, 1927). Pulp is beaten and jordaned to convert part of its cellulose into cellulose hydrate; the resulting product is passed through a hot starch solution, pressed and dried. This treatment serves to facilitate production of greaseproof papers. —A.P.-C.

Power Consumption of Beaters. J. Carchereux. PAPETERIE 49, 637-641 (July 25, 1927). The power consumption of a beater can be considered as consisting of the following: (1) friction of the shaft in the bearings, (2) friction of the roll against the bedplate, (3) kinetic energy of the stock carried round the roll, (4) friction of the roll against the stock in the region between the roll and backfall, and also of the fibers against one another in this same region, (5) friction of the roll against the stock in front of the bedplate. From a discussion of these several factors it is shown that the power consumption can be considerably reduced by designing the beater so as to eliminate (4) and reduce (5) to a minimum, the reduction being of the order of 50 per cent.—A.P.-C.

Beating Pulp to Obtain Paper of High Strength. A. E. Barnard and R. G. Caswell, assignors to W. B. Pratt, Inc. U. S. pat. 1,648,838 (Nov. 8, 1927). In order to produce paper of high bursting strength the pulp is beaten in presence of ammonia.—A.P.-C.

Beloit Removable Fourdrinier. Anon. PAPER MILL 51, No. 8, 62, 64, (Feb. 25, 1928). A description of the Beloit removable fourdrinier and of the Aldrich high speed shake, with a discussion of their merits.—A.P.-C.

Apparatus for Hydrating Paper Pulp. H. Jackson. U. S. pat. 1,652,720, Dec. 13, 1927. A horizontal, closed, cylindrical cast iron casing is lined with alternate bronze bars and wooden fillers to form an internal ribbed surface. Inside is a rotor or internal beater built up of a number of hammers threaded on to and pivoted upon rods disposed around the central shaft. The rods are mounted in disks which are keyed to the central shaft and which are of slightly smaller diameter than the internal diameter of the casing. The hammers are each made with a cranked arm and with an elongated boss at one end, extending to one side only of the arm, to give a long bearing and wearing surface on its rod, and tapering outwards from the boss with a broad end or flat sole at the free end to hammer or tap the fibers against the ribbed wall of the casing. The hammers are made right and lefthand, those threaded on alternate rods being righthand and those on the alternate rods lefthand. They thus fit more closely together and are staggered in the line of rotation and overlap one another. Any degree of hydration can be obtained by pumping the stock through two or more machcines in succession.—A.P.-C.

Drum Refiner. Ulrich Kirchner. Fr. pat. 634,672, May 19, 1927. This apparatus is very much the same as the rod mill, consisting essentially in a hollow drum inside which are a number of refining elements consisting of rods or tubes which may be of the same or different diameters, and which roll freely as the drum is rotated.—A.P.-C.

Apparatus for Beating or Refining Paper Pulp . S. D. Wells. Eng. pat. 285,277. The apparatus consists of a rotatable drum in which the pulp is tumbled, pounded and beaten by intermingling with a number of rods, placed parallel to the axis of the drum, which are free to roll and tumble together when the drum is rotated. With this improved pulping apparatus it is claimed that the length of the fiber is maintained and the fibers are not disintegrated into the sawdust-like particles produced by the process in which a rotary abrading or cutting device is used.—A.P.-C.

Treatment of Fibers in the Rod Mill. W. A. Gocke. PAPER MILL 51, No. 22, 36, 54, 56, 80 (June 2, 1928); Paper Trade J. 86, No. 23, 79-81 (June 7, 1928). A discussion of the operation and performance of the rod mill for beating and hydrating papermaking fibers.—A.P.-C.

Process for Defibering Fibrous Material. S. D. Wells. U.S. pat. 1,654,624, Jan. 3, 1928. The material is cooked until it is uniformly softened, but not pulped, and is then disintegrated in a rod mill.—A.P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Costs and Cotton

By Thomas J. Burke, C. A.

The Cotton Textile Institute, Inc., has early recognized the value and necessity of concentrating on its cost problems, and is to be congratulated on "An Outline of Bases to be Used in Predetermining Costs for Guidance as to Sales Policies", published in August 1928.

This publication is the work of the Institute's Cost Engineer, and has been approved among others, by a well known firm of Public Accountants.

There are however, certain suggestions and statements made in this outline, which are of sufficient importance to warrant an examination as to their value and accuracy.

Interest on Investment

For instance the outline states, "This item of overhead or capital charge, should be included in the computation of costs at a rate of 6 per cent, or any higher rate indicated by the current cost of money." In addition to this statement investment is defined as including inventories of raw materials, stock in process and finished goods, as well as other working capital, such as cash, accounts receivable, etc. The statement is also made "That the modern tendency is unquestionably toward its (interest on investment) inclusion as a cost item, in arriving at a minimum cost at which sales can be made and the business continue to enjoy reasonable prosperity."

Again outline states, "if a mill ignores this item and predetermines its cost in disregard to it, then the mill may sell its goods for prices sufficient to cover all other elements of cost, and still be unsuccessful and unsound as a commercial proposition, because it has ignored any allowance for compensation for the capital employed."

Now frankly, it is at least questionable, whether the modern tendency is toward the inclusion of interest on investment as a cost item, as is also the statement, that if a mill fails to so include this interest in its cost, this fact is going to materially affect its sales policy, if its costs are otherwise properly compiled. Everybody has heard so many arguments on the subject of interest on investment, that a dissertation on the subject is unnecessary, but it is only fair to state, that there are a number of accountants and Trade Associations, (and probably they are in the majority), who believe that manufacturing costs should not be burdened with interest computations but believe, that such computations merely confuse the issue, which after all, is the making of a reasonable profit, and that more ground is gained if executives have constantly brought to their mind, their responsibility for making a reasonable profit on the capital employed in the business. 6 per cent will not insure "reasonable" prosperity to a manufacturing concern nor will its inclusion in costs guarantee that such a profit will be made.

After reading the Institute's recommendations on this point, the thought occurs as to what should be done regarding interest on bonds and mortgages? As in the case of "interest on investment", there are accountants that advocate the inclusion of such interest in costs; however, the outline is silent on this subject.

Raw Material Costs

The outline also recognizes the use of what is called "replacement cost instead of book value" of cotton and waste, in the predetermination of costs for use in determination of sales policy. There is no doubt that cotton manufacturers experience considerable difficulty due to the variation which takes place in the current market value of their principal raw product, but this does not seem to be a sufficient reason for advocating this somewhat radical departure from good accounting practice, even when as stated, the costs are to be used for determining the sales policies. For instance, how often is the cost to be changed? Daily? Or more frequently in a greatly fluctuating market? A better plan would perhaps be, the adoption of a standard cost system, whereby an average price based partly on a conservative forecast, and partly on past experience could be used for pricing raw materials into the work in process account. By this method the raw material account would of course, show a profit or loss, according as this average exceeded or fell below the actual price paid. There must be a good deal of doubt, as to whether the plan advocated in outline would be successful in maintaining prices at a reasonable level, for in the event of cotton prices increasing, there could hardly be a simultaneous agreement on the part of the manufacturers to increase cotton textile prices immediately.

Another point to be considered is the fact, that there is a hint of illegality in the suggestion, that all cotton textile mills should raise their prices whenever the price of their principal raw material increases, irrespective of what they actually paid for this material. In our belief, a better way would be to recommend the adoption of a standard cost system, which by comparing actual with standard costs, would bring out the causes for the variances from the standard costs. These might be price or material variances, and an investigation of these would be a guide to more efficient management in the future.

Income Taxes

Perhaps the most surprising statement made in the outline is, "that income taxes should be included in costs, including income

taxes payable to the Federal or State Governments." In this connection a small foot note explains, "that since interest at 6 per cent on the investment is being included in the costs, it follows that corporate income taxes payable in respect of this income, should also be included." In other words, the Institute recommends that its members should first include a profit in their costs, and then because they do this, they should also include the income taxes payable on this profit.

In our belief, a Trade Association is better adivsed to collect definite financial statistics, to show the progress or retrogression of the industry as a whole, and to permit of comparisons between its individual units. Such ratios will enable executives to compare their position with the average for the industry, and will also enable them to price their products in such a way, as to give them a reasonable return on the capital employed. The recommendation that manufacturing costs should be made a sort of a "hold-all" for every kind of an expense, is surely misleading and unreasonable. Everybody understands there is a difference between "net operating profit" and "net profit". Some concerns may be organized and financed in a totally different way to others. Efficiency should be gauged on "net operating profit" and its ratio or percentage to the capital employed. It would seem also a better policy, for Trade Associations today, to urge their members to strive for "better business" rather than "bigger business", namely, that they should sell their products on a "quality" rather than a "price" basis. Competition should be in costs and manufacturing efficiency and stress laid on the necessity for obtaining a reasonable profit on all products sold. Practically every industry today, has a surplus productive capacity, so that competition is keen and the profit margin narrow.

The inclusion of "interest on investment" and income taxes as in costs seems to be merely a device to induce the executive to charge higher prices than he otherwise would. While the objective sought is good, the means taken to reach it, seem to be of questionable usefulness, and a better way, at least in our opinion, would be the undertaking of an educational program in the use of ratios and their application in estimating profits.

The installation of a standard cost system and a budget system, would surely be more effective in building up sound business in an industry, than such devices as those referred to.

Fixed Assets and the Plant Ledger

By A. W. Astley [1]

Before joining the large list of self-appointed commentators and mentors who impose themselves and their ideas upon an already overburdened audience of accountants, allow me to say that in preparing this paper, no claim whatsoever is made as to its being a finished work, nor does the writer expect that what is to be said will be entirely acceptable to his audience. He realizes, in fact, that this article may be quite truthfully termed a case of the blind leading the blind, but through it all, there is a hope that something said may stir an imaginative mind and engage its most serious thoughts on a most important subject.

America is prosperous—no one denies that the total income of this nation is greater than it has been in any previous period. No matter in whose hands the buying power of the country rests, that buying power is greater now than ever before. No matter if one or more industries are suffering from a temporary relapse, industries as a whole flourish on a larger scale than ever before.

The modern business executive gathers these facts from reliable statistics issued regularly by the government, banking institutions, trade association reports, and other literature edited by recognized economists.

Relative Position of His Business

It is with the aid of such information that the business executive is able to plot the relative position of his own business to that of the nation at large. Not that the condition of his own business nor that of the nation at large is attributable to such statisics, or even to the philosophy of our best informed economists. In fact, as we view the modern executive emerging from his never ending conflict with such problems as "The Possibilities of Mass Production; High Cost of Distribution; Capital Investment; Advertising Appropriation; To Merge or Not to Merge"; and, lest we forget, "The Income Tax," we are quite confident that modern economic conditions and even principles are the results of the thoughts and actions of business men.

But these results like all great endeavors and accomplishments must be recorded on the pages of history, so as to reveal them to the world of today and probably assist the world of tomorrow.

Hence we find the business executive carefully studying this up to the minute history as revealed to him through such statistics, charts, trade reports, etc.

But, these reports have to do with the nation at large. They are the interpretation of masses of data by means of summarization.

What then of his own domain? What has the works of his own creation brought forth?

Serious Questions

These are indeed serious questions and for his answer he turns to that page of history so vital to management, investors and governmental regulation, his balance sheet. From it, he shall form conclusions and bring about action, providing he is satisfied as to its accuracy. He is quite aware of the fact that the rules for debits and credits have been carefully observed, but he is also aware that according to the science of accounting, a balance sheet at best is but an expression of opinion. With this in mind, he considers it most imperative that they who are charged with the duty of preparing it, must have at hand an accounting practice capable of substantiating the accuracy of such opinion. This audience gathered here today represent that group of accountants who are charged with the duty of preparing balance sheets throughout the paper industry.

Have we in our possession an accounting practice capable of substantiating the accuracy of the opinions recorded on our balance sheets?

To be quite sure of our answer, let us review as many items as time will allow, that are commonly found on a modern balance sheet.

The form and arrangement of the balance sheet which we are to review is that sanctioned by bankers and credit men wherein the assets are grouped and arranged in order of availability or liquidity, and the liabilities in the order in which they will or should be discharged.

Cash the First Item Under Review

It is evident, therefore, that cash is the first item under review and we are quite satisfied with the orthodox manner of recording all receipts and disbursements in the cash book; also the common use of the petty cash book which together with the canceled checks, signed petty cash vouchers, and bank statements quite completely eliminate the need of opinion in this particular asset. Notes receivable with its notes receivable journal wherein a true and perfect record is found of each one of these instruments, offers an accurate guide in the appraisal of this item. Accounts receivable with its customers ledger wherein an accurate detail of each and every transaction affecting trade debtors is found, offers

[*] Presented at Convention of the Cost Association of the Paper Industry, Cleveland, Ohio, October 25, 1928.

[1] Cost Accountant, Chemical Paper Mfg. Co., Holyoke, Mass.

the business executive a perfect opportunity to study in detail the good, doubtful, and bad that dwell therein, as well as to assist him in the problem of keeping this item within due bounds.

Inventories with its cost system which determines the amount and cost of every article in stock whether fully or partly manufactured, as well as raw materials and supplies, has long since retired the mystery and suspicion surrounding this important item, by presenting to the business executive a complete analysis, allowing every opinion to be quite clearly revealed.

Fixed Assets With Its Plant Ledger

Fixed assets with its plant ledger—Why not? How else is this gigantic treasure chest to be opened and its contents examined? Whose opinion dwells therein and what is there at hand to reveal that opinion? With such questions in mind, is it surprising that the progressive business executive has demanded that a plan of accounting be adopted which will enable him at all times to view his physical plant in its properly enumerated units, observe the respective value at which these units have been capitalized, and look well to their estimated years of useful life, which results in that annual charge for depreciation, before which no profits can be accurately determined. Particularly serious is this latter item, for not only does the business executive concern himself with the normal years of life as estimated by the engineering department, but, with king consumer sitting upon his throne, showing thumbs down to the old and thumbs up to the new, he must measure with his keenest judgment the possible life of this equipment in the face of sudden obsolescence, a hazard which today appears far more real than depreciation.

It is therefore, quite imperative that this plant ledger be respectfully presented to the business executive. To do this is not easy for an established concern accustomed to taking depreciation on a general grouping of property, such as buildings or machinery. For such a concern the splitting up and allocation of the old capital outlay must be approximate.

A complete record and history of depreciation as well as of plant and equipment can be secured through the plant ledger. This aims to do for plant and equipment what the perpetual inventory record does for stock on hand. Such a plant ledger ties up with the general books of account and supplies detail for total cost of property; depreciation written off in any year; additions, renewals, and disposition of property; amount in depreciation reserves; estimated scrap value, and net remaining sound value of property.

In addition, the plant ledger will contain a brief description of all property, where located, plant identification, name of manufacturer and manufacturer's number, from whom and when purchased, total cost, including freight and installation charges, estimated useful life of equipment and rate of depreciation; and it may likewise have a record of repairs, replacement values and a tabulation of monthly depreciation.

The plant ledger can be compiled in card or loose-leaf form. Practically the same form can be used for departmental and final summaries of plant and depreciation. The complete financial, plant and performance history of each item of property secured in this way guides future outlays upon plant, helps the accurate determination of loss or gain on specific assets, is of some importance in credit applications, simplifies compiling and checking tax and annual statements, and is invaluable in event of fire loss. The surprising thing is that there is still a comparatively large number of concerns operating without such a plant ledger.

Arrangement of the form of plant ledger as well as its size, etc., depends on ingenuity of the executive or cost accountant designing it, as well as on his sense of what is important information for his particular requirements, industry or plant. It may be desired to compress all the information on a small card, using both sides, or it may be considered wise to keep track of monthly depreciation, the cost of repairs or replacement values. These are details to be adjusted to and by individual needs.

The accounting practice in connection with the plant ledger is quite simple. To illustrate, we will assume that a project is about to be started. The job order bearing a specific number, complete instructions and a duly authorized signature, starts the project on its way. The original job order is sent to the accounting department, the duplicate is sent to the stores clerk. The accounting department sets this up in a properly designed file and awaits further detail to come forward. The stores clerk files his copy in an open order tray and awaits the first call for material or labor in connection with this project. Should it be necessary to place a purchase order for equipment or supplies, the duplicate is sent to the maintenance department office and the triplicate is sent to the stores clerk. This triplicate copy is placed in the open order file until receipt of goods, upon which the date and quantities received is recorded opposite each item appearing on the order, thereby enabling the order to serve in the capacity of a receiving record as well.

In this capacity it comes forward to the accounting department accompanied by properly made out job order charge slips upon which the disposition of the newly received items appear.

Reconciles the Receiving Record

The accounting department reconciles the receiving record with its respective invoice, posts the correct value appearing on the invoice to the respective items appearing on the job order charge slips, sends the charge slips along to the job order clerk and prepares the invoice for payment. The job order clerk files the charge slip behind the original job order and awaits further detail.

The labor devoted to the project is reported on a repair shop daily time report, upon which appear the employee's name, the date, job number, time on the job, and a brief description of the work done. These time reports are reconciled with the employee's clock card each day thereby assuring a correct distribution of the pay roll.

Upon receipt of the daily time reports in the accounting department, they are extended at the respective labor and burden rate, and then filed behind the original job order.

Upon the project being completed the stores clerk clock stamps the duplicate copy of the job order and sends it along to the accounting department, where it is reconciled with the original order. All the job order charge slips filed with the order are now totaled. All the daily time reports filed with this order are also totaled. The sum of the two totals, together with the respective job order number and complete description, is now recorded on the development project record, there to await judgment as to its ultimate disposition.

Gone Over by Maintenance Manager

At stated intervals this development project record is gone over by the manager of maintenance and the accountant who carefully reviews each project appearing thereon.

To aid them in arriving at an opinion, the job order, job order charge slips, and job order time slips are at hand, permitting an exhaustive study to be made if necessary. Upon arriving at a final opinion, the distribution is made opposite the job cost appearing on the development project record. At this time the totals of the job order charge slips are posted to a summary as a credit to the maintenance department stores account. The job order time slips are posted to a summary as a credit to the repair shop labor and burden account and the distribution appearing on the development project record is posted to a summary as a debit to the respective fixed assets, repairs or development account.

The development project record then serves in the preparation of the plant ledger cards which are set up at this time, by furnishing the estimated salvage value, estimated years of useful life, and the value at which each item has been capitalized. This value you will remember is that which has been duly charged to the fixed assets account, thus tying in the plant ledger with the general books of account.

From the job order and the respective job order charge slips, all descriptive matter for the plant ledger cards are obtained, after which they are submitted to the executive for his careful study, correction and approval.

Safety an Executive Responsibility*

By Matthew S. Sloan [1]

In considering the need for accident prevention or safety work the public utility executive is confronted with the moral obligation involved and his financial responsibility to his company. To my mind the first of these is the dominant one. Our obligation to do everything possible within our companies and within our industry to prevent accidents and to assure the safety of life and limb of our workers is as great as our obligation to be honest in our business transactions. A basic human relationship is involved. In an industry, which has ideals such as ours has, which serves the comfort and happiness of humankind, we could not evade, if we would, this responsibility for saving the flesh and blood of our own people.

In addition, we have a moral obligation to safeguard members of the public so far as our operations carry or tend to carry any hazard affecting the public welfare; and to do our part in co-operation with other agencies in community safety movements.

To Set Standards

Our financial responsibility to our respective organizations is a definite one. Accidents are costly and wasteful. The company which has fewest of them is, by virtue of that fact, the company which is best administered in that phase of its operations. It is our duty to our stockholders, and our duty as public utilities serving the public, to operate as efficiently and economically as possible. We have, therefore, this financial responsibility to carry on accident prevention and safety educational work, so that accidents may be reduced to a minimum which year by year shall grow less, and to set standards which year by year shall grow higher.

In my opinion the impetus—the motive power—for such work, must come from the chief executive of the company. Details of the work, naturally, must be carried out by others. Authority and responsibility must be delegated. The chief executive, however, cannot divest himself of obligations and responsibility for the success of the enterprise, and it will not be wholly successful if he undertakes to do so. It must be known by every person on the company payroll that safety is something in which the chief executive is personally and keenly interested—something which he personally follows through and with which he is acquainted. It must be known that there is a responsibility for accidents, that somebody will be made to answer for them, and that the record of their occurrence will come to the attention of the head of the company. There is nothing, in my opinion, which will do more than this to keep the subject alive in all ranks of the company's employees and to make each of them "safety conscious." This is the result for which we are all aiming.

The accident prevention work of the Brooklyn Edison Company is organized on that basis. The safety committee reports directly to the president. It is made up of the electrical engineer, the superintendent of distribution, the superintendent of transportation, the engineer of steam operation and the director of personnel and statistics. This group has been intentionally made small after considerable experience with larger combinations. The intent is to have each member a worker rather than one of a large group organized to listen to reports.

How the Brooklyn Edison Company Promotes Safety

The work is carried down to the rank and file employees by a safety sub-committee, organized in each major sub-division of the company. Each sub-committee consists of three or four employees selected from any grade. They are released from their regular work for one full day each week without loss of pay, so that they may inspect their departmental practices to see whether safety regulations are being carried out, to evolve additional precautions if necessary, to examine safety suggestions, and generally to spend the day with their minds concentrated on the matter of safety.

It has been found that service on these committees produces a great quickening of interest in the subject and a vastly improved point of view. In order to permit as many employees as possible to have opportunity to serve, the membership is changed about every four weeks.

The permanent, continuous work of the company is conducted by the safety engineer whose staff makes a regular inspection of all buildings and machinery. In addition, each sub-committee consults with him or a member of his staff before it begins its work, and at the end of the day reports its findings and suggestions. The results of this work by the sub-committees may be judged by the fact that in the last ten months they submitted 1,951 suggestions for increasing the safety of employees, many of which, of course, were received from other employees during their visits of inspection. Of these suggestions, 1,155 have been examined to date, and 606 have been actually adopted because their merit was manifested. The others are still under consideration.

A medical bureau in charge of a full-time and two part-time physicians is maintained to supervise the treatment of accident cases. First aid kits, inhalators and gas masks are provided at appropriate places, and one especially equipped first aid room has been installed. Thorough instruction in resuscitation work is given to all employees, both men and women.

The Smallest Cases Reported

We insist that all accidents, even scratches, be reported, and once an accident is reported it is followed up by the company's physician until the case is disposed of properly. By having even the smallest cases reported we make sure that no serious results will occur from neglected minor injuries.

Careful statistics are kept on all lost-time cases. They show that during the last five years of safety work, our rate has decreased from 0.44 days lost for each thousand man-hours worked to 0.28.

I have described our system of accident prevention work and cited its results not because I believe that we have a perfect system, but to emphasize the three following features which I consider essential to the reduction of accidents and the inculcation of the safety idea among our employees:

First, the direct personal participation and interest of the chief executive;

Second, an organization, embracing all divisions and ranks of employees working in cooperation with the safety department.

Third, careful, systematic year-in, year-out attention to the safety principle and suggestions for its application in every branch and phase of operations.

The Intent to Avoid Accidents

It is unfortunately true that the element of risk-of-hazard cannot be eliminated from life. Human nature is fallible; and fatigue, error or carelessness will always take its toll of life and limb. Our task is to reduce the element of risk to its lowest possible dimensions. This involves first, the maintenance of the greatest safety factor in our plants and equipment and the highest standards of practice in operation; and second, a constant education of our people to impress upon them the results of error or carelessness and to lodge in them the positive, active intent and purpose to avoid and prevent acts or conditions which may result in accidents to themselves or others.

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* Executive Service Bulletin.

[1] Pres., New York Edison Co.; Pres., Brooklyn Edison Co.

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NEW ORLEANS	344 Camp Street
PHILADELPHIA	Packard Building
PHOENIX, ARIZ.	Heard Building
PITTSBURGH	Farmers Deposit Bank Building
PORTLAND, ORE.	Failing Building
SALT LAKE CITY	Kearns Building
SAN FRANCISCO	Sheldon Building
SEATTLE	L. C. Smith Building
HONOLULU, T. H.	Castle & Cooke Building
HAVANA, CUBA	Calle de Aguiar 104
SAN JUAN, P. R.	Recinto Sur 51

82 YEARS EXPERIENCE

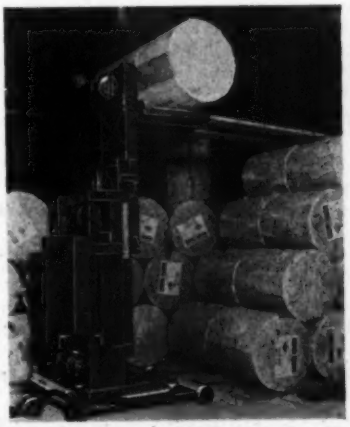
In Making

Felts for Paper Manufacturers certainly recommends our ability to satisfactorily serve your requirements

OUR TRIUNE AND MULTIPLE PLY DRYER FELTS

English Weave—Fine Face Felt in Three, Four, Five and Six Ply—60" to 214" in width—insure large production. Absolutely no felt marks in paper.

FITCHBURG DUCK MILLS
Established 1844
FITCHBURG, MASS.



A prominent Texas newspaper The Houston Chronicle uses the Revolvator to store heavy rolls of paper stock.

THE REVOLVATOR

Many of the largest as well as the smaller newspaper publishers use Revolvators for handling rolls of paper. Generally the space allotted for paper storage in newspaper plants is limited, which necessitates the utilizing of practically every cubic foot. Of every device or machine considered, the Revolvator, in the opinion of many publishers, best fulfills the requirements, from every angle of low first cost, maintenance, operation, safety, speed and labor. In addition, The Revolvator being portable, may be used for other work. Send for descriptive bulletin PT and get the complete story—now.

PORTABLE AND STATIONARY ELEVATORS
LIFTRUCKS—STORAGE RACKS

REVOLVATOR CO.

357 GARFIELD AVENUE JERSEY CITY, N. J.

First Pulp and Paper Conference

By B. T. McBain

I was invited; I accepted and attended the first pulp and paper conference ever held on the Pacific Coast. It was suggested by Prof. H. K. Benson, in charge of Chemical Engineering at the University of Washington, and was set for 10 a.m., October 26, 1928.

There were over 100 pulp and paper mill men present; among them presidents, managers, mill managers, secretaries, salesmen, chemical engineers, regular pulp mill operators and men interested in pulp and paper mills, besides professors of this, that and everything from the University, including foresters, tax experts, government officials, the secretary of the state of Washington, Hon. Grant Hinkle, two or three university presidents, vice presidents, deans, and yours truly.

The papers presented and discussion thereof took all day from 10 a.m. to 5:30 p.m. and then the banquet held at the Wilsonian Hotel, near the University of Washington campus, was just what was promised. How they did it for the money I don't know.

The whole affair was well planned, well staged, well handled and well, it was evidently just what was needed.

Over 70 met after the banquet and the first steps were taken toward a permanent organization. Dr. Benson was authorized to ask all the operating mill officials to appoint one live wire to a committee to form a division of the Technical Association of the Pulp and Paper Industry. The date for the first committee meeting and all arrangements were left to the Doctor.

The University of Washington has a fine lot of equipment in its laboratory which can be adapted to pulp and paper mill work. In fact a large amount of experimental pulp and paper mill equipment is already in use by the students.

I, for one, wish to thank Dr. Benson for the good efforts he is making to help the pulp and paper industry help itself. He deserves a vote of thanks of the entire industry, not only that of the Pacific Northwest.

Among the mills represented were:

Everett Pulp and Paper Company, by its president, Wm. Howarth, and two or three others.

Cascade Paper Company, by four representatives, including its manager.

Inland Empire Paper Company, of Spokane.

San Juan Pulp Manufacturing Company.

British Columbia Sulphite Company, by its manager, Mr. Killam, and three others.

Crown Willamette Paper Company, by three from both West Linn and Camas, including one mill manager.

Hawley Pulp and Paper Company, Oregon City.

Washington Pulp and Paper Company, Port Angeles.

Longview Fiber Company, Longview, Wash.

Rainier Pulp and Paper Company, by general superintendent, Dave Davies, and two or three others.

Gray's Harbor Pulp and Paper Company, Hoquiam.

West Lumber and Pulp Company, Aberdeen.

Northwestern Pulp and Paper Company, Astoria.

Fiber Board Company, by two or three from Sumner, Wash., and Portland, Ore.

Union Bag and Paper Corporation, of Tacoma, by half a dozen.

Nearly all of the allied trades were represented, including chemicals, felts and wires, as well as equipment of all kinds.

W. B. Bullock Speaks at Glens Falls

GLENS FALLS, N. Y., November 5, 1928.—"Inasmuch as New York is one of the three most important paper making states in the union the enforcement of the national tariff laws to prevent unfair foreign competition is most important to this state," said Warren B. Bullock, manager of the Import Committee of the American Paper Industry, before the Glens Falls Rotary Club.

"With all the smoke screen about the tariff which is being disseminated by both parties in the campaign now so near its close, one thing must not be overlooked, and that is that tariff revision is certain during the next few months, a year at the latest.

"The Import Committee of the American Paper Industry, however, has not devoted its attention to the writing of tariff schedules, but solely to the enforcement of the laws already in effect. When the committee was formed, the country was being flooded with foreign paper imported in evasion of the Tariff Act, either by undervaluation, misclassification or dumping.

"You can better appreciate the efforts of importers to evade the law when you are told that even religious publications are attempting to secure free entry of the book and thin Bible paper they use by misclassifying the paper as standard news print, which is of all the grades of paper made, without a protective duty. When such users are attempting to evade the laws of the United States it is evident that the American paper industry faces a serious problem."

Increasing Belt Production

Pulleystone applied to the surface of iron, steel, or wood pulleys it is claimed will give them an efficiency equal to or better than that of a new paper pulley. It is applied to the small pulley of producing machines and to motor pulleys. If there has been any

PULLEYSTONE

belt slippage the production output of the machine will immediately pick up and increase—sometimes the increases are very large.

It is sold on the basis of its being a device for increasing the output of producing machines with existing equipment. No equipment changes are required. It increases the output with all types of belting—leather, rubber, or canvas, etc.

The increase in production output comes primarily from the elimination or reduction in belt slippage. When a belt driven machines is new the drive (with leather belts) has an efficiency of 98 per cent or higher. But as bearings, belts, etc., wear or as the speed of machine or load is increased beyond what the equipment was purchased to do—slippage develops. On used equipment Pulleystone is claimed to bring the efficiency up to 98 per cent with existing equipment which results in speeding up the production.

Pulleystone is a plastic material that comes only in 20 lb. cans. It spreads over the pulley with the hand and is then smoothed off with the back of the hand dipped in warm water. The surface is then smooth enough to give a very high adhesion. This adhesion increases with service. It can be applied quickly and by any one.

It provides a pulley surface guaranteed to give the claimed results. The surface is permanent. It is sponsored by the Chicago Belting Company, 113 North Green street, of Chicago—who are sole distributors for the United States.

BOLTON QUALITY

JOHN W. BOLTON & SONS, INC.

EAGLE KNIFE & BAR WORKS

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The only firm making KNIVES for every machine from wood pile to finishing room.

It's the KNIVES that do the work!

Prompt deliveries made from stocks in
NEW YORK
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TRADE MARK

Clear the decks for good business

Business has passed the summer doldrums . . . active times are ahead. Experienced executives, in planning production, are paying attention to dyestuffs.

Heller & Merz Colors meet modern production requirements. They are quality dyestuffs which justify the confidence placed in them by leading manufacturers.

Heller & Merz service, second to none, has stood the test 60 years. Ask any of our customers!

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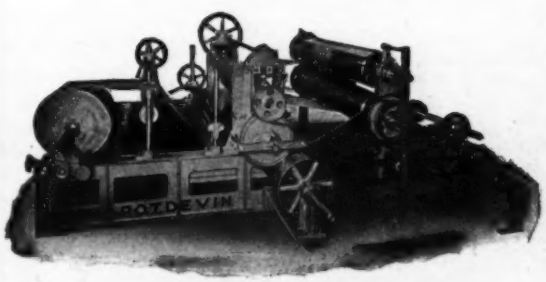
PAPER WAXING MACHINERY

Three Widths—52" - 64" - 80"

LIGHT OR HEAVY COATING
WET OR DRY WAX
ONE OR BOTH SIDES



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FINE FELTS for FINE PAPERS

Finish, Long Life and Satisfaction

The WATERBURY FELT CO.

SKANEATELES FALLS, N.Y.

TRADE MARK REGISTERED

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 3, 1928

SUMMARY

Cigarette paper .....48 bls., 268 cs.
Wall paper .....105 bls., 4 cs.
Paper hangings .....35 bls., 5 cs.
Hanging paper .....1 cs.
News print .....1,284 rolls, 123 bls.
Printing paper .....101 rolls, 114 bls., 36 cs.
Wrapping paper .....48 bls., 17 cs.
Packing paper .....30 cs.
Drawing paper .....35 cs.
Filter paper .....10 cs.
Surface coated paper .....132 cs.
Metal coated paper .....19 cs.
Baryta coated paper .....147 cs.
Gold coated paper .....7 cs.
Transfer paper .....8 cs.
Decalcomania paper .....79 cs.
Litho paper .....5 cs.
Writing paper .....88 cs.
Cellophane paper .....4 cs.
Colored paper .....29 cs.
Stencil paper .....51 cs.
Crepe paper .....4 cs.
Tissue paper .....18 cs.
Envelopes .....3 cs.
Straw board .....412 rolls
Miscellaneous paper .....167 bls., 164 cs.

CIGARETTE PAPER

Max Spiegel & Son, C. Biancamano, Genoa, 48 bls.

British American Tobacco Co., Berengaria, Southampton, 60 cs.

P. J. Schweitzer, Pres. Wilson, Marseilles, 117 cs.

F. C. Strype, Paris, Havre, 1 cs.

Standard Products Corp., Paris, Havre, 80 cs.

Guibout freres, Mauretania, Southampton, 7 cs.

WALL PAPER

A. C. Dodman, Jr., Inc., Berengaria, Southampton, 10 bls.

A. C. Dodman, Jr., Inc., Mauretania, Southampton, 3 bls., 1 cs.

G. J. Hunken, Pres. Harding, Bremen, 1 cs.

J. E. Bernard & Co., Cleveland, Hamburg, 3 bls.

S. Stern Stiner & Co., Cleveland, Hamburg, 1 cs., 1 ble.

A. C. Dodman, Jr., Inc., Olympic, Southampton, 77 bls., 1 cs.

W. H. S. Lloyd & Co., American Trader, London, 11 bls.

PAPER HANGINGS

Whiting & Patterson Co., Inc., Berengaria, Southampton, 3 cs.

Whiting & Patterson Co., Inc., Mauretania, Southampton, 2 cs.

A. C. Dodman, Jr., Inc., Samaria, Liverpool, 14 bls.

A. C. Dodman, Jr., Inc., Celtic, Liverpool, 21 bls.

HANGING PAPER

Atlantic Forwarding Co., Paris, Havre, 1 cs.

NEWS PRINT

588 rolls.

Parsons & Whittemore, Inc., Karlsruhe, Bremen, A. S. Zabriskie, Karlsruhe, Bremen, 180 rolls, 114 bls.

Ossian Ray, Gripsholm, Gothenburg, 63 rolls, 9 bls.

F. Henjes, Jr., Westphalia, Hamburg, 65 rolls.

National City Bank, Malaren, Kotka, 388 rolls.

PRINTING PAPER

P. C. Zuhlke, Pennland, Antwerp, 26 cs.

Keuffel & Esser, Cleveland, Hamburg, 101 rolls.

National City Bank, Westphalia, Hamburg, 107 bls.

E. Dietzgen & Co., Westphalia, Hamburg, 10 cs.

J. I. Bermitz, Brazil Maru, Hamburg, 7 bls.

WRAPPING PAPER

Birn & Wachenheim, Pennland, Antwerp, 17 cs.

T. Barrett & Son, Gripsholm, Gothenburg, 48 bls.

PACKING PAPER

Haule Wax Paper Manfg. Co., Cleveland, Hamburg, 30 cs.

DRAWING PAPER

Keuffel & Esser, Cleveland, Hamburg, 30 cs.

Devoe & Reynolds, Tuscania, London, 2 cs.

H. Reeve Angel & Co., Inc., Tuscania, London, 3 cs.

FILTER PAPER

F. Henjes, Jr., Columbus, Bremen, 1 cs.

H. Reeve Angel & Co., Inc., Tuscania, London, 9 cs.

SURFACE COATED PAPER

Whiting & Patterson Co., Inc., Cleveland, Hamburg, 4 cs.

Abraham & Strauss, Cleveland, Hamburg, 1 cs.

Quality Art Novelty Co., Cleveland, Hamburg, 7 cs.

P. C. Zuhlke, Pennland, Antwerp, 28 cs.

Gevaert Co. of America, Pennland, Antwerp, 94 cs.

METAL COATED PAPER

Hensel, Bruckman & Lorbacher, Karlsruhe, Bremen, 3 cs.

Hensel, Bruckman & Lorbacher, Pres. Roosevelt, Bremen, 16 cs.

BARYTA COATED PAPER

J. H. Schroeder Banking Corp., Karlsruhe, Bremen, 20 cs.

Globe Shipping Co., Karlsruhe, Bremen, 50 cs.

Globe Shipping Co., Pres. Roosevelt, Bremen, 53 cs.

J. H. Schroeder Banking Corp., Pres. Roosevelt, Bremen, 24 cs.

GOLD COATED PAPER

F. Murray Hill, Columbus, Bremen, 7 cs.

TRANSFER PAPER

Atlantic Forwarding Co., Westphalia, Hamburg, 8 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Samaria, Liverpool, 25 cs. (duplex).

B. F. Drakenfeld & Co., Samaria, Liverpool, 8 cs. (simplex).

C. W. Sellers, Coulmbus, Bremen, 10 cs.

C. W. Sellers, Columbus, Bremen, 10 cs.

L. A. Consmiller, Pres. Roosevelt, Bremen, 20 cs.

LITHO PAPER

K. Beetar, Inc., C. Biancamano, Genoa, 5 cs.

WRITING PAPER

Globe Shipping Co., Berengaria, Southampton, 1 cs.

J. E. Bernard & Co., Olympic, Southampton, 1 cs.

W. J. Byrnes, Cabo Mayor, Marseilles, 78 cs.

The Eleto Co., Mauretania, Southampton, 1 cs.

J. E. Bernard & Co., Mauretania, Southampton, 4 cs.

B. Altman & Co., Mauretania, Southampton, 2 cs.

American Express Co., Mauretania, Southampton, 1 cs.

CELLOPHANE PAPER

M. J. Corbett & Co., Berengaria, Southampton, 2 cs.

M. J. Corbett & Co., Mauretania, Southampton, 2 cs.

COLORED PAPER

S. Gilbert, Pres. Harding, Bremen, 6 cs.

S. Gilbert, Pres. Roosevelt, Bremen, 23 cs.

STENCIL PAPER

Arlac Dry Stencil Co., Cleveland, Hamburg, 51 cs.

CREPE PAPER

L. Greenberg & Son, Cleveland, Hamburg, 4 cs.

TISSUE PAPER

B. F. Drakenfeld & Co., Samaria, Liverpool, 5 cs.

G. W. Sheldon & Co., Minnewaska, London, 3 cs.

National City Bank, Roma, Genoa, 10 cs.

ENVELOPES

Japan Paper Co., American Trader, London, 3 cs.

STRAW BOARD

Grand Corrugated Paper Co., Veendam, Rotterdam, 256 rolls.

Perkins, Goodwin & Co., Veendam, Rotterdam, 156 rolls.

MISCELLANEOUS PAPER

F. C. Strype, C. Biancamano, Genoa, 3 cs.

Japan Paper Co., C. Biancamano, Genoa, 24 cs.

Globe Shipping Co., Veendam, Rotterdam, 54 cs.

Heemsoth, Basse & Co., Veendam, Rotterdam, 9 bls.

C. K. MacAlpine & Co., Gripsholm, Gothenburg, 158 bls.

Japan Paper Co., Gripsholm, Gothenburg, 7 cs.

Keller Dorian Paper Co., Paris, Havre, 21 cs.

G. W. Sheldon & Co., Paris, Havre, 17 cs.

Guibout Freres, Paris, Havre, 6 cs.

Standard Products Corp., Paris, Havre, 23 cs.

M. Snedeker Corp., Brazil Maru, Hamburg, 9 cs.

RAGS, BAGGINGS, ETC.

A. Bloom, Pres. Roosevelt, Bremen, 44 bls. rags.

Union Waste Co., Pres. Roosevelt, Bremen, 43 bls. linen threads.

S. Birkenstein & Son, Inc., Brazil Maru, Hamburg, 13 bls. rags.

Castle & Overton, Inc., America, Bremen, 11 bls. rags.

Castle & Overton, Inc., East Side, England, 15 bls. rags.

Castle & Overton, Inc., East Side, England, 156 bls. bagging.

C. R. Spence, East Side, Dublin, 154 bls. rags.

P. Garvan, Sud Atlantico, Havana, 88 bls. rags.

Havana Paper Co., Sud Atlantico, Havana, 45 bls. rags.

W. Steck & Co., Sud Atlantico, Buenos Aires, 60 bls. rags.

E. Butterworth & Co., Inc., Lepanto, Hull, 270 bls. paper stock.

Brown Bros. & Co., Lepanto, Hull, 50 bls. rags.

Castle & Overton, Inc., Lepanto, Hull, 85 bls. bagging.

Castle & Overton, Inc., Lepanto, Antwerp, 18 bls. rags.

Chemical National Bank, Lepanto, Antwerp, 161 bls. rags.

Bank of The Manhattan Co., Nobles, Tunis, 174 bls. rags.

Leigh Textile Co., Nobles, Barcelona, 94 bls. cotton waste.

Bank of The Manhattan Co., West Carnifax, Alexandria, 160 bls. rags.

Interstate Trust Co., West Carnifax, Alexandria, 60 bls. rags.

E. J. Keller Co., Inc., West Carnifax, ——, 291 bls. rags.

W. Schall & Co., Veendam, Rotterdam, 154 bls. bagging.

Van Oppen & Co., Veendam, Rotterdam, 23 bls. rags.

P. Berlowitz, Veendam, Rotterdam, 35 bls. paper stock.

Sanitary Bag Co., Veendam, Rotterdam, 111 bls. rags.

Darmstadt, Scott & Courtney, Veendam, Rotterdam, 77 bls. bagging.

Banco Com'l Italiane Trust Co., Cabo Mayor, Genoa, 482 bls. bagging.

Castle & Overton, Inc., Cabo Mayor, Leghorn, 113 bls. rags.

1st National Bank of Boston, Cabo Mayor, Barcelona, 46 bls. rags.

Anglo South American Trust Co., Cabo Mayor, Barcelona, 189 bls. rags.

S. Birkenstein & Son, Inc., Cabo Mayor, Valencia, 48 bls. rags.

Brown Bros. & Co., Transylvania, Glasgow, 25 bls. rags.

Castle & Overton, Inc., Cleveland, Hamburg, 32 bls. rags.

Brown Bros. & Co., Cleveland, Hamburg, 31 bls. rags.

Castle & Overton, Inc., Corson, Leghorn, 39 bls. rags.

Bank of The Manhattan Co., Corson, Naples, 22 bls. rags.

Castle & Overton, Inc., Liberty, Havre, 70 bls. bagging.

French American Banking Corp., Anna C., Bari, 63 bls. rags.

National City Bank, Anna C., Trieste, 261 bls. rags.

National City Bank, Anna C., Bari, 40 bls. rags.

C. B. Richard & Co., Anna C., Bari, 84 bls. rags.

Castle & Overton, Inc., Anna C., Italy, 72 bls. rags.

W. Schall & Co., London Merchant, London, 83 bls. rags.

Chase National Bank, Westphalia, Hamburg, 448 bls. rags.

E. J. Keller Co., Inc., Westphalia, ——, 36 bls. linen threads.

Interstate Trust Co., Westphalia, Hamburg, 27 bls. rags.

Castle & Overton, Inc., Westphalia, Hamburg, 14 bls. rags.

French American Banking Corp., Sangamon, Bari, 94 bls. rags.

Ernst Mayer, Bellepline, Rotterdam, 21 bls. rags.

OLD ROPE

Castle & Overton, Inc., Lepanto, Hull, 77 bls.

Brown Bros. & Co., Lepanto, Hull, 180 coils.

Banco Com'l Italiane Trust Co., Corson, Naples, 95 bls.

Brown Bros. & Co., Minnewaska, London, 67 coils.

Brown Bros. & Co., Liberty, Havre, 49 coils.

Furness Withy & Co., London Merchant, London, 91 coils.

R. Canovai & Son, Saturnia, Trieste, 80 rolls.

CASEIN

National City Bank, Vestris, Buenos Aires, 84 bags.

(Continued on page 80)

Union Screen Plate Company

Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

UNION BRONZE

SCREEN PLATES FOR FLAT SCREENS

6 SLOTS—5 SLOTS—4½ SLOTS—4 SLOTS—PER INCH

Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens

Sole Manufacturers of the Union-Witham Screen Plate Vat and Fastener

This is the *Plate*

on which 90% of the Jobbers are building their business.

Bakers prefer it, because it is moulded from pulp in exactly the same shape as a tin plate, absorbent and keeps their pies in perfect shape.

Write us for prices.

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KEYES FIBRE COMPANY, INC.
General Sales Offices: GRAYBAR BLDG., NEW YORK
Factory: Waterville, Me. JOHN M. HART COMPANY, INC., *Manager of Sales*

"It Pays to Analyze"

Paper and Pulp Mill engineers thruout the country have proven that it "pays to analyze." The analysis of raw materials and the finished product permits buying and selling on definite specifications with a consequent saving to you.

We particularly specialize in the
Analysis of paper mill materials.
Analysis of paper of all kinds.
Solving problems of paper manufacture.
Development of mill control tests.
An opportunity to demonstrate the value of our service to your organization is requested.

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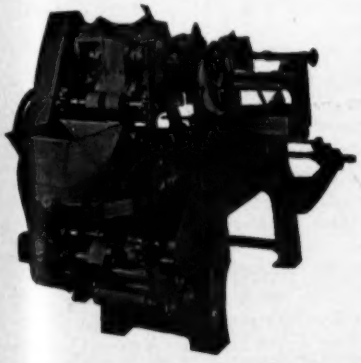

HIGHEST SPEED
Paper Bag Machinery

Get My Quotations Before Placing Your Orders
Special Machinery Designed and Built

A. L. PARRISH
1702 Robinson St., South Bend, Ind.

Imports of Paper and Paper Stock

(*Continued from page 78*)

CHINA CLAY

L. A. Salomon & Bros., Celtic, Liverpool, 145 casks, 80 bags.

WOOD PULP

Atterbury Bros., Inc., United States, Oslo, 500 bls. wood pulp, 100 tons.

Castle & Overton, Inc., United States, Oslo, 320 bls. wood pulp, 40 tons.

A. P. W. Paper Co., Laila, Chandler, 1,519 tons sulphite.

Polaris Shipping Co., Hillegom, Sonora, 1,132 cords wood pulp.

Bulkley, Dunton & Co., Karlsruhe, Bremen, 2,000 bls. wood pulp.

Perkins, Goodwin & Co., Malaren, Sundsvall, 150 bls. sulphite.

M. Gottesman & Co., Inc., Malaren, Sundsvall, 475 bls. sulphite.

O. E. Kiaer, Stavangerfjord, Oslo, 400 bls. sulphite.

O. E. Kiaer, Bergensfjord, Oslo, 1,875 bls. sulphite.

WOOD PULP BOARDS

C. K. MacAlpine & Co., Gripsholm, Gothenburg, 13 bls.

WOOD FLOUR

State Chemical Co., Veendam, Rotterdam, 420 bags.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 3, 1928

Bank of The Manhattan Co., Nobles, Barcelona, 125 bls. rags.

Equitable Trust Co., Nobles, Valencia, 249 bls. rags.

Chase National Bank, Nobles, Valencia, 192 bls. rags.

Chemical National Bank, Nobles, Valencia, 225 bls. rags.

Congoleum Nairn Co., West Carnifax, Alexandria, 150 bls. rags.

Guaranty Trust Co., Corson, Leghorn, 206 bls. rags.

Interstate Trust Co., Corson, Leghorn, 199 bls. rags.

Banco Com'l Italiane Trust Co., Corson, Leghorn, 366 bls. rags.

Bank of The Manhattan Co., Corson, Naples, 137 bls. rags.

A. H. Searle, London Merchant, London, 183 bls. rags.

Bank of The Manhattan Co., London Merchant, London, 27 bls. rags.

The Lang Co., London Merchant, London, 302 bls. rags.

E. J. Keller Co., Inc., London Merchant, ——, 88 bls. rags.

Lagerloef Trading Co., Malaren, Kotka, 227 bls. wood pulp boards.

Johnston Paper Co., Malaren, Kotka, 124 bls. news print.

Paper House of Penna., Malaren, Kotka, 72 cs. printing paper.

Scandinavian Pulp Agency, Inc., Malaren, Sundsvall, 500 bls. sulphite pulp.

Scandinavian Pulp Agency, Inc., Malaren, Sundsvall, 1,250 bls. sulphate pulp.

M. Gottesman & Co., Inc., Malaren, Sundsvall, 925 bls. sulphite pulp.

Johanson, Wales & Sparre, Inc., Malaren, Sundsvall, 900 bls. sulphite pulp.

Bulkley, Dunton & Co., Malaren, ——, 250 bls. wood pulp.

Bulkley, Dunton & Co., Malmen, ——, 250 bls. wood pulp.

O. E. Kiaer, Mexicano, Oslo, 600 bls. sulphite pulp.

Castle & Overton, Inc., Anaconda, Rotterdam, 234 bls. rags.

Castle & Overton, Inc., Kolsnaren, Sweden, 818 bls. wood pulp.

Castle & Overton, Inc., Exporter, France, 117 bls. rags.

Castle & Overton, Inc., Eupatoria, Germany, 484 bls. rags.

Castle & Overton, Inc., Eupatoria, Germany, 8 cs. wire.

Castle & Overton, Inc., Sorvard, Italy, 26 bls. rags.

Castle & Overton, Inc., Saco, Antwerp, 1 ble. rags.

Castle & Overton, Inc., West Eldara, Holland, 87 bls. rags.

Castle & Overton, Inc., Rosandra, Italy, 143 bls. rags.

Castle & Overton, Inc., M. Maru, Japan, 80 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 3, 1928

Hutzler Bros., Liberty, Havre, 3 cs. writing paper.

Castle & Overton, Inc., Liberty, Havre, 233 bls. rags.

Congoleum Nairn Co., Liberty, Dunkirk, 81 bls. rags.

W. H. Masson & Co., Bellepline, Rotterdam, 39 bls. old rope.

Bulkley, Dunton & Co., Atlantic, ——, 875 bls. wood pulp.

Bulkley, Dunton & Co., Zenada, ——, 250 bls. wood pulp.

E. J. Keller Co., Inc., Gaasterdyk, ——, 600 bls. wood pulp.

Castle & Overton, Inc., Eastern Dawn, Antwerp, 200 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 3, 1928

Castle & Overton, Inc., Aquarius, Germany, 1 bls. rags.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 3, 1928

G. M. Graves & Co., West Carnifax, Alexandria, 160 bls. rags.

French American Banking Corp., Corson, Genoa, 151 bls. rags.

French American Banking Corp., Corson, Leghorn, 137 bls. rags.

French American Banking Corp., Corson, Naples, 75 bls. rags.

Bulkley, Dunton & Co., Amasis, ——, 255 bls. wood pulp.

Bulkley, Dunton & Co., Consul Corfitzen, ——, 2,625 bls. wood pulp.

Bulkley, Dunton & Co., Kelkheim, ——, 1,400 bls. wood pulp.

O. E. Kiaer, Mexicano, Greaker, 250 bls. sulphite pulp.

O. E. Kiaer, Mexicano, Oslo, 2,360 bls. sulphite pulp.

Castle & Overton, Inc., Ammon, Germany, 2,744 bls. wood pulp.

Castle & Overton, Inc., West Eldara, Italy, 31 bls. rags.

Specifications for Mimeograph Paper

The Federal Specifications Board at Washington is adopting and promulgating purchase specifications for commercial commodities purchased by the various departments and establishments of the United States Government.

These specifications, in the formative stage, are submitted to representative manufacturers for their comment and criticism.

The proposed master specifications for mimeograph paper, 30 per cent rag are printed herewith.

The Federal Specifications Board would be glad to receive any comments or suggestions as to changes which may be thought to be desirable in the specification, and such comments or criticisms will have to be received by the Board not later than December 18 if they are to receive attention of the technical committee considering this subject.

The specifications are as follows:

I. GENERAL SPECIFICATIONS.

United States Government General Specification for Paper, Federal Specifications Board Specification No. 394, in effect on date of invitation for bids, shall form part of this specification.

II. TYPE.

This specification is for the purchase of 30 per cent rag mimeograph paper, wove, white, weighing 50 pounds per ream 25 x 38 inches, 500 sheets; flat.

III. MATERIAL AND WORKMANSHIP.

See detail requirements, Section IV.

IV. GENERAL REQUIREMENTS.

Samples—50 sheets 8 x 10½ inches, to show color and finish, must be submitted with bid.

V. DETAIL REQUIREMENTS.

1. Weight.—25 x 40, 500; 52.6 pound basis (25 x 38—50).

2. Average bursting strength.—Shall be not less than 16 points.

3. Stock.—Shall be not less than 30 per cent rag; the remainder shall be free unbleached or ground-wood pulp.

4. Ash.—Shall not exceed 12 per cent.

5. Sizing.—Shall be sufficiently sized to be written on with ink.

6. Color, Finish, and Formation.—Deliveries must conform to the accepted sample and be suitable for mimeographing.

7. Size.—8 x 7, 8 x 10½, or 8 x 13 inches, as specified in invitation for bids.

Robert Gaylord Co. Opens Portland Office

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., October 25, 1928.—Charles Baum of the Robert Gaylord Company, Inc., eastern manufacturer of Fiber board shipping boxes and cases, has been in Portland opening an office for the display of the company's products. The office headquarters are in the Terminal Sales building. G. A. Sieverling will be in permanent charge.

In discussing the use of these products, Mr. Baum states that fresh fruits packed in the "take-home" boxes is a popular item in the East. He states that high grade lumber is now protected in shipping by having a fiber board cap over each end.

SOME PAPER MILL USERS OF
Badenhausen Boilers
Superheaters :: Preheaters

Geo. F. Hardy, Consulting Engineer, New York
For Southern Paper Co., two orders, total 4700 H.P.
For St. Croix Paper Co. ..... 1200 H.P.
For Brown Paper Mill Co. ..... 3430 H.P.
Central Paper Co., Muskegon, Mich., four orders, total ..... 3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total ..... 2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Willamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total ..... 920 H.P.
Kieckhefer Container Co., Delair, N. J. ..... 1800 H.P.

Badenhausen Corporation

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GENERAL OFFICE, 1011 CHESTNUT ST.
PHILADELPHIA, PA., U. S. A.

120 Broadway, New York — 211 Tramway Bldg., Denver
Reibald Bldg., Dayton, Ohio — 513 House Bldg., Pittsburgh
1019 Guardian Life Bldg., St. Paul

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HAFSLUND NORWAY — **"HAFSLUND BEAR" Bleached Sulphite**

F:HAGA — **"FORSHAGA" Bleached Sulphite**

KRAFT HURUM NORWAY SPECIAL KOOS BAC — **"HURUM SPECIAL" Extra Strong Kraft**

"BAMBLE" Extra Strong Kraft

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CONTENTS

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City Addresses of Mills and Mill Supply Houses
Classified List of Paper Mill Products
Classified List of Pulp Mill Products
Coated Paper Manufacturers
Envelope Manufacturers
Glazed and Coated Paper Manufacturers
Idle Mills
Mill Officials
Pad Manufacturers
Paper Merchants
Paper Stock and Rag Dealers
Paper Bag Manufacturers
Paper Box Manufacturers
Paper, Wood Pulp and Chemical Fiber Mills of the United States, Canada, Cuba, Mexico and South America
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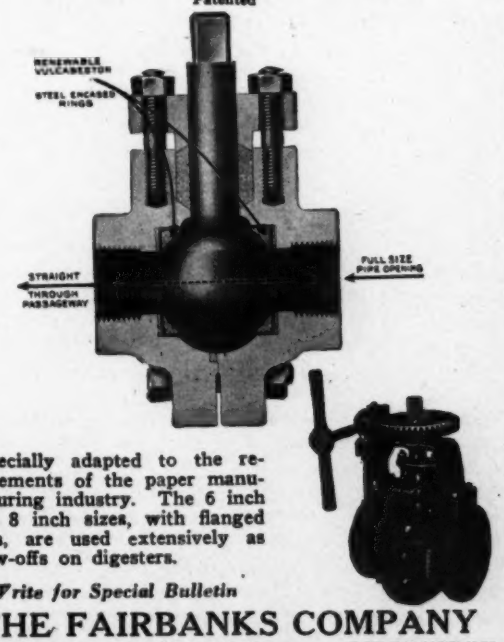

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THE FAIRBANKS COMPANY
BOSTON NEW YORK PITTSBURGH
Factory: Binghamton, N. Y.
Distribution in ALL Principal Cities

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 6, 1928.

Trading in the local paper market was fairly active during the past week. Almost all of the various grades have enjoyed an active demand, with supplies moving steadily into consumption. Prices are stable and practically no instances of shading have been reported. Sales forces of the leading paper houses expect to book many good orders before the new year.

Consumption of news print is expanding and contract withdrawals are moving in heavy volume. Production is being maintained at approximately 80 per cent of total capacity. Substantial reductions of news print prices are being made on contracts signed for the forthcoming year. Announcement by the International Paper Company of the closing of a contract with the Hearst papers for a large tonnage over several years at prices below current levels may succeed in stabilizing the market.

Paper board continues to enjoy a good demand. Box board is moving forward into consumption at a steady rate. Prices are generally firm. The various grades of fine papers are in good request and quotations adhere to schedule. The market for coarse paper is strong and wrapping paper is still moving in heavy volume. Prices are practically unchanged.

Mechanical Pulp

Business in the ground wood market during the past week has been chiefly seasonal. The supply of both imported and domestic mechanical pulp is adequate for the current demand. Contract shipments are moving normally into consumption. Prices in general are holding up to former levels and reports of shading are rare.

Chemical Pulp

The chemical pulp market continues to exhibit a steady undertone, with a fairly persistent demand for the different grades. Manufacturers report numerous contracts for business in the coming year. Lower prices on this year's deliveries have been accepted in some instances.

Old Rope and Bagging

The demand for domestic and imported old rope is moderately persistent. Consignments of manila rope are going into consumption at the usual rate and prices are generally firm. The bagging market is still rather quiet. Scrap bagging is in moderate request and roofing bagging shows a somewhat slow tendency. Prices are generally steady.

Rags

Transactions in the rag market during the past week have been chiefly routine. Domestic cotton cuttings have brought an average demand, but the market for roofing grades is only light for this season of the year. The foreign rag market is still rather quiet. Prices on the various grades of domestic and imported rags are generally holding to schedule.

Waste Paper

The undertone of the paper stock market is still strong. The demand for book stock is especially heavy, and prices are firm. Soft white and hard white shavings are moving in large volume. The various grades of waste paper used in the board mills are going forward at an especially brisk pace. Old kraft machine compressed bales are being shipped steadily. Prices are generally firm.

Twine

Business in the twine market during the past week was chiefly routine. The demand for wrapping paper has been up to average and the various grades of twine are in good request. Manufacturers anticipate booking a satisfactory volume of orders before the close of the year. Prices quoted last week continue to hold good.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 7, 1928.—The Government Printing Office has received the following bids for 54,060 pounds, various sizes, high finish sulphite manila tag board; American Writing Paper Company, at 7.41 cents per pound; Whitaker Paper Company, 7.15 cents; Mathers-Lamm Paper Company, 8 cents; R. P. Andrews Paper Company, 7.73 cents; Dobler & Mudge, 9.25 and 9.75 cents; Reese & Reese, 6.85 cents; and Port Huron Sulphite and Paper Company, 6.95 cents.

The Printing Office has also received the following bids for 39,000 pounds of colored calendered tag board in 23½ inch rolls; R. P. Andrews Paper Company, at $3,123.60 and Atlantic Paper Company, at $3,196.40 and $3,546.40.

The Printing Office has awarded the contract to Barton, Duer & Koch for furnishing 2,135 pounds (45,000 sheets) of 21 x 32 46½., russet bond paper at 19 cents, bids for which were received on October 10.

The American Writing Paper Company will furnish 15,400 pounds (43,500 sheets) of 26 x 42 No. 1 white rope drumhead manila paper at 16.03 cents per pound while the Virginia Paper Company will furnish 1,390 pounds (2,500 sheets) of 40 x 60 rope manila paper at 18.3 cents. Bids for both of these items were received on October 19.

The R. P. Andrews Paper Company will furnish 3,000 pieces of 12 x 9½ gray photo mount board at $15.40 per 1,000 sheets, bids for which were received on October 15.

Changes in Hawley Paper Co.

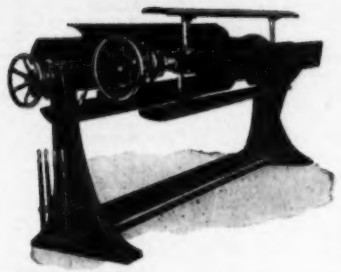
PORTLAND, Ore., November 1, 1928.—Willard P. Hawley, Jr., vice-president and general manager of the Hawley Pulp and Paper Company, Oregon City and Portland, has been promoted to the position of executive vice-president of the company. W. A. Kelley, of Green Bay, Wis., will succeed Mr. Hawley as general manager and vice-president and will assume his duties at the Hawley plant December 1. W. P. Hawley, Sr., who is at present travelling in Europe, will remain as president of the company.

Blake, Moffitt & Towne Changes

SAN FRANCISCO, Cal., November 5, 1928.—E. A. Doran of the Los Angeles Division of Blake, Moffitt & Towne, has been elected a Vice President, resident in San Francisco, and will have full authority over the purchasing department of the corporation, and over the sales departments of the San Francisco division and its branches in Northern California.

First Vice President James W. Towne will relinquish the immediate conduct of the purchasing department, to give his time to the general affairs of the corporation.

H·S MACHINE CO.



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for strength in Tear, Fold and Mullen. Super Alpha equals the higher grades of rags in the manufacture of fine papers.

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This is a grade developed for mills of limited beating capacity. While not giving results equal to Super Alpha, it produces wonderful paper on short beating.

REGULAR ALPHA

This is a grade midway between Super and Easy-Beating.

Use ALPHA for Quality

BROWN COMPANY
FOUNDED 1852
Portland, Maine

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 7, 1928.

BLANC FIXE.—Business in the blanc fixe market was normally active during the past week. Shipments on contract proceeded in good volume. Quotations remain unchanged, the pulp selling at from $42.50 to $45.00 per ton, in bulk, and the powder at from 3½ cents to 3⅝ cents a pound, in barrels, at works.

BLEACHING POWDER.—Manufacturers of bleaching powder have announced that contract quotations for 1929 will remain the same as those for the current year. Demand for this product has increased recently. Bleaching powder is selling at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Steadiness prevails in the casein market. Prices remain practically the same. Domestic casein is still quoted at from 15½ cents to 17 cents per pound. Imported casein is selling at from 16 cents to 16½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Producers of caustic soda have announced that contract prices for the current year will hold good for 1929. Solid caustic soda is selling at from $2.90 to $2.95. The flake and the ground are quoted at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Contract shipments of china clay are moving into consumption satisfactorily. Prices are unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side. Domestic paper making clay is selling at from $8 to $9 per ton, and pulverized at from $10 to $12 per ton, at mine.

CHLORINE.—Manufacturers of chlorine have announced a reduction of half a cent per pound on all contracts for the forthcoming year. At that price contracts for 1929 are being actively sought. Chlorine is now selling at 3 cents per pound, in tanks, or multi-unit cars, at works, on contract orders, and at 4½ cents per pound, in cylinders, car lots, at works.

ROSIN.—Trading in the rosin market continues moderately active. At the naval stores the grades of gum rosin used in the paper mills are still selling at from $9.35 to $9.40 per 280 pounds, ex dock, in barrels. Wood rosin is quoted at from $7.15 to $7.95 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Business in the salt cake market continued as in the past week, with production adequate for current demands. Prices are steady. Salt cake is quoted at from $15 to $17 per ton, and chrome salt cake is quoted at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—According to reports from producers, contract prices on soda ash for 1929 will adhere to the current level. Contract quotations on soda ash, in car lots, at works, per 100 pounds, according to grade, are still: in bags, $1.32½, and in barrels, $1.55.

STARCH.—Business in the starch market during the past week continued along routine lines. Consumption of supplies has been normal for the season. No changes in prices have been reported. Special paper making starch is quoted at $4.07 per 100 pounds, in bags, and at $4.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—The market for sulphate of alumina still shows a strong undertone. This product enjoys a brisk demand. Prices are firm. Commercial grades of sulphate of alumina are selling at from $1.40 to $1.55; the iron free at from $1.90 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Manufacturers report no changes in the sulphur market which is still exhibiting a strong undertone. Contract shipments are moving forward steadily and numerous inquiries for future business are being received. Prices are unaltered. Sulphur is quoted at from $18 to $19 per ton, in bulk, at mine, on contract. The spot price is $20 per ton.

TALC.—Transactions in the talc market have been chiefly routine during the past week. Prices are steady. Domestic talc is selling at from $16 to $18 per ton, at eastern mines. Imported talc is quoted at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@	38.00
Bonds	9.00	@	45.00
Writings—			
Extra Superfine	14.00	@	32.00
Superfine	14.00	@	32.00
Tub sized	10.00	@	15.00
Engine sized	8.00	@	11.00
News—			
Rolls, contract	3.25	@	—
Rolls, transient	3.25	@	3.50
Sheets	3.65	@	3.85
Side Runs	3.00	@	3.75
Book, Cased—			
S. & S. C.	6.35	@	7.75
M. F.	6.25	@	7.75
Coated and Enamel	8.00	@	15.00
Lithograph	8.00	@	15.00
Tissues—Per Ream—			
White No. 1	.75	@	1.00
Anti-Tarnish	1.35	@	1.90
Colored	1.00	@	2.00
White No. 2	.70	@	.80
Kraft	.90	@	1.00
Manila	.70	@	.80
Kraft—			
No. 1 Domestic	6.25	@	6.50
No. 2 Domestic	4.50	@	4.75
Southern	4.25	@	4.50
Imported	6.50	@	7.00
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.75	@	5.25
No. 2 Wood	4.00	@	4.50
Butchers	3.75	@	4.25
Fibre Papers—			
No. 1 Fibre	5.00	@	5.50
No. 2 Fibre	4.75	@	5.25
Common Bogus	2.75	@	3.00
Screenings	3.00	@	3.25
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs.	13.00	@	16.00
Bleached, basis 20 lbs.	15.00	@	16.00

(Delivered New York)

Boards—per ton—			
News	42.00	@	45.00
Straw	52.50	@	55.00
Chip	42.50	@	45.00
Binders' Boards	65.00	@	67.50
Sgl. Mla. Ll. Chip	51.00	@	52.90
Wood Pulp	80.00	@	85.00
Container	55.00	@	62.50
85 Test Jute Liner	55.00	@	57.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—			
Moist	28.00	@	31.25
Dry	32.00	@	34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@	29.00
Screenings	15.00	@	20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—			
Bleached	3.65	@	4.40
Easy Bleaching	2.80	@	2.90
No. 1 strong unbleached	2.50	@	2.75
Mitscherlich unbleached	2.55	@	3.25
No. 2 strong unbleached	2.40	@	2.60
No. 1 Kraft	2.50	@	2.75
No. 2 Kraft	2.40	@	2.50
Sulphate—			
Bleached	3.75	@	3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—			
Bleached	3.40	@	4.75
Easy Bleaching Sulphite	2.60	@	2.75
News Sulphite	2.40	@	2.65
Mitscherlich	3.00	@	3.70
Kraft (Domestic)	2.50	@	3.30
Soda Bleached	3.15	@	3.30
Sulphate Screenings—			
Coarse	.75	@	.85
Refined	1.50	@	1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	11.00	@	11.50
New White, No. 2	8.00	@	8.50
Silesias No. 1	7 25	@	7.75
New Unbleached	10.50	@	11.00
Washables	4.25	@	4.75
Fancy	5.50	@	6.00
Blue Overall	6.75	@	7.25
New Blue Prints	5.25	@	5.50
New Soft Blacks	5.25	@	5.75
Mixed Khaki Cuttings	4.75	@	5.25
Pink Corset Cuttings	8.00	@	8.50
O. D. Khaki Cuttings	5.25	@	5.75
Men's Corduroy	3.75	@	4.25
New Mixed Blacks	3.50	@	3.75
Old Rags			
White, No. 1—			
Repacked	5.50	@	6.00
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	3.00	@	3.50
Miscellaneous	2.50	@	2.75
St. Soiled, White	2.00	@	2.15
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.75
Roofing Rags—			
Cloth Strippings	1.70	@	1.80
No. 1	1.70	@	1.80
No. 2	1.55	@	1.65
No. 3	1.30	@	1.40
No. 4	1.25	@	1.35
No. 5A	.95	@	1.05

Foreign Rags

New Dark Cuttings	2.50	@	3.00
New Mixed Cuttings	2.75	@	3.25
New Light Silesias	7.00	@	7.50
Light Flannelettes	7.50	@	8.00
Unbleached Cottons	10.00	@	11.00
New White Cuttings	10.50	@	11.50
New Light Oxfords	7.00	@	7.50
New Light Prints	5.50	@	6.50
No. 1 White Linens	7.25	@	8.00
No. 2 White Linens	5.50	@	6.25
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	3.00	@	3.50
Old Extra Light Prints	2.75	@	3.25
Ord. Light Prints	2.25	@	2.50
Med. Light Prints	1.90	@	2.10
Dutch Blue Cottons	2.25	@	2.50
German Blue Linens	2.50	@	2.75
German Blue Cottons	2.00	@	2.25
Checks and Blues	1.75	@	1.90
Lindsay Garments	1.80	@	1.85
Dark Cottons	1.60	@	1.65
Old Shopperies	1.50	@	1.55
New Shopperies	1.50	@	1.60
French Blues	2.10	@	2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.60	@	1.70
Domestic	1.70	@	1.75
Wool Tares, light	1.60	@	1.65
Wool Tares, heavy	1.60	@	1.65
Bright Bagging	1.60	@	1.65
Small Mixed Rope	1.25	@	1.40
Manila Rope—			
Foreign	3.35	@	3.65
Domestic	3.25	@	4.00
New Burlap Cut	2.75	@	3.00
Hessian Jute Threads—			
Foreign	3.50	@	4.00
Domestic	3.25	@	3.50

Old Waste Papers

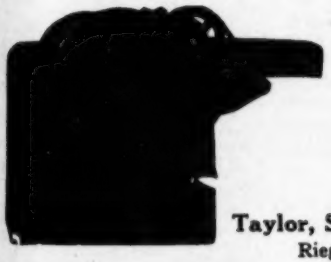
(F. o. b. New York)

Shavings—			
Hard, white, No. 1	3.25	@	3.50
Hard, white, No. 2	2.40	@	2.55
Soft, White, No. 1	2.55	@	2.65
White envelope cuttings	3.25	@	3.50
Flat Stock—			
Stitchless	1.60	@	1.70
Overissue Mag.	1.60	@	1.70
Solid Flat Book	1.50	@	1.60
Crumpled No. 1	1.15	@	1.25
Solid Book Ledger	2.00	@	2.10
Ledger Stock	1.60	@	1.75
Manilas—			
New B. B. Chips	.65	@	.75
New Env. Cut	2.40	@	2.60
New Cuttings	1.60	@	1.85
Extra No. 1 old	1.25	@	1.35
Print	.80	@	.85
Container	.72½	@	.77½
Bogus Wrapper	.75	@	.85
Old Kraft Machine Compressed bales	1.85	@	1.95
News—			
No. 1 White News	1.75	@	1.80
Strictly Overissue	.85	@	.95
Strictly Folded	.75	@	.85
No. 1 Mixed Paper	.60	@	.65
Common Paper	.35	@	.40

Ham Feltz says:

"I ain't what you'd call a learned guy, but it's been my observin' that when a guy thinks of but one thing for a long time he gets to know that thing just about 100 per cent. Same way in felts. The fellows that make these here Hamilton Felts have been thinking felts gosh darn on to 70 years. And old Ham Feltz says that they're some felts."

Hamilton Felts



GIANT

RAG CUTTERS

Taylor, Stiles & Company
Riegelsville, N. J.

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Blow Pits
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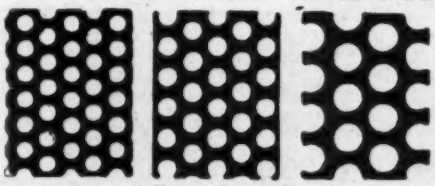
PERFORATED METALS



of Every Description
For Pulp and Paper Mills

THE HARRINGTON & KING PERFORATING CO.

5652 Fillmore St., Chicago, Ill.
NEW YORK OFFICE: 114 Liberty St.

Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Ameri Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¼
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¾	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	53.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	2.90	@	3.00
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.25	@	1.35
Blanks	1.70	@	1.80
Krafts	1.90	@	2.05
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.65	@	.75
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manil Sul., No. 1	.04½	@	.06
Manil No. 2	.04	@	.04½
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.07	@	.07½
Common Bogus	.03	@	.03½
Straw Board	52.50	@	75.00
News Board	45.00	@	—
Chip Board	42.50	@	—
Wood Pulp Board (Carload Lots)	4.50	@	5.00
Binder Boards—			
No. 1, per ton	80.00		
No. 2, per ton	75.00		
Carload lots	60.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.93	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Washable, No. 2	.03	@	.03½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	—	@	.04
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.65	@	1.80
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.15	@	1.25
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.80	@	1.90
Writing Paper	1.70	@	1.75
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common Paper	.60	@	.65
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.90	@	.95
Old Newspaper	.70	@	—

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Repacked	.02¼	@	.02¾
No. 2	1.40	@	1.50
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.25	@	—
No. 5A	.85	@	.90
B	.80	@	.90
C	.70	@	.80
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.70	@	1.85

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04	@	.04¾
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	34.50	@	55.00
Filled News Board			45.00
Chip Board			42.50
Single Manila Pulp Lined Board	52.50	@	57.50
Single White, Patent Coated Newsboard Bender	70.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.45	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.20	@	1.25
White Blank News	1.70	@	1.75
Old Kraft	1.90	@	2.00
Print Manila	.80	@	.90
No. 1 Mixed Paper	.60	@	.65
Overissue News	.85	@	.90
Old Newspapers	.75	@	.80
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.30
Manila Rope—			
Foreign	3.25	@	3.50
Domestic	3.25	@	3.50
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.45
Scrap Sisal	1.50	@	1.75
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09	@	.10
Silesias, No. 1	.06	@	.06½
New Unbleached	.09½	@	.10
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06	@	.06½
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04½
Corduroy	.03	@	.03½
New Canvas	.08	@	.09½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	3.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	—	@	2.50
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.55	@	1.60
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.25	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¼	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11¼	@	—
Fancy Shirt Cuttings	.05½	@	—

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BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munising Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s,, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¾	10¾
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	65	75
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	105	None Off.

Wall Paper Census

WASHINGTON, D. C., October 24, 1928.—The Department of Commerce announces that, according to data collected at the biennial census of manufactures taken in 1928, the establishments engaged primarily in the production of wall paper in 1927 reported products valued at $30,059,153, a slight decrease—about three one-hundredths of one per cent—as compared with $30,069,005 for 1925, the last preceding census year.

The establishments classified in this industry are those engaged primarily in designing and printing wall paper, using as their principal material "hanging paper" manufactured in paper mills.

Of the 53 establishments reporting for 1927, 16 were located in New York, 13 in Illinois, 11 in Pennsylvania, 6 in New Jersey, 3 in Ohio, 2 in Massachusetts, 1 in Connecticut, and 1 in Indiana.

The statistics for 1927 and 1925 are summarized in the following table. The figures for 1927 are preliminary and subject to such correction as may be found necessary after further examination of the returns.

	1927	1925	Per cent of increase or decrease (—)
Number of establishments	53	49	(1)
Wage earners (average number)[2]	4,811	5,069	—5.1
Wages[3]	$5,981,451	$5,862,765	2.0
Cost of materials, shop supplies, fuel, and purchased power, total[3]	$14,612,415	$14,999,041	—2.6
Materials and supplies	$14,075,489	(4)	....
Fuel and power	$ 536,926	(4)	....
Value of products[5]	$30,059,153	$30,069,005	(6)
Value added by manufacture[6]	$15,446,738	$15,069,964	2.5
Horsepower	13,343	11,528	15.7

[1] Per cent not computed where base is less than 100.
[2] Not including salaried employees.
[3] The amount of manufacturers' profits cannot be calculated from the census figures, for the reason that no data are collected in regard to a number of items of expense, such as interest on investment, rent, depreciation, taxes, insurance, and advertising.
[4] Not reported separately.
[5] Decrease of less than one-tenth of 1 per cent.
[6] Value of products less cost of materials, shop supplies, fuel, and purchased power.

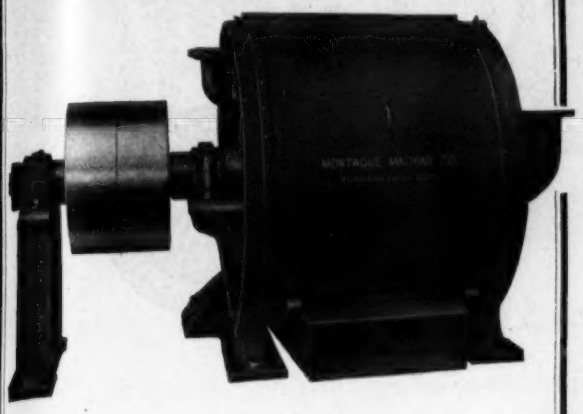
To Build Largest High Pressure Steam Plant

A project of unusual interest has been announced by the Philip Carey Manufacturing Company, Cincinnati, Ohio, manufacturers of asbestos and magnesia high pressure steam pipe insulation, etc. This company is to construct at the Lockland, Ohio, works a boiler and power plant designed for 1,800 lb. steam pressure. This will be the highest steam pressure ever used in America, and the plant will be the largest high pressure steam plant in the world. W. E. S. Dyer, consulting engineer, Philadelphia, Pa., will design and have charge of the construction of the new work.

The high pressure steam generating equipment will be furnished by Combustion Engineering Corporation of New York, and will operate at 1,800 lb. pressure. Integral economizers, water-cooled furnace walls, air preheaters, superheaters and pulverized fuel equipment will comprise these units.

The main generating units will consist of two 5,000 h.p. vertical triple expansion, direct connected engines, operating with 1,400 lb. pressure at the throttle, at a temperature of 800 degrees F., and exhausting against 60 lb. back pressure above the atmosphere. To each engine will be direct connected a 3-phase alternator.

All the equipment for this plant will be placed with American manufacturers, except the main engines, which will be furnished by A. Borsig of Berlin, Germany. The operating cycle of this plant will make it one of the most efficient steam plants in the world.



The Montague Screen

(Patent applied for)

A summary of actual performance on first screening of groundwood, extending over a period of several months of continuous operation.

Normal capacity about forty tons per day on one half of one per cent stock; power below one horse power per ton; two pounds water pressure on shower; tailings about seven per cent of the quantity of stock fed to screen and quality of screening perfectly satisfactory.

Montague Machine Co.

Turner Falls, Mass.

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FIFTY-SEVENTH YEAR

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